

MANUFACTURERS' RECORD

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TO OUR ADVERTISERS.

It has been impossible to have all
advertisements exactly correct and
properly located.

Our advertisers, we feel, will appreciate
the difficulties encountered
and bear with us until conditions
can be fully met.

The Manufacturers' Record is published this week, pending the re-establishment of The Record Printing House in Baltimore, by George F. Lasher, of Philadelphia.

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Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 70 and 71.

LET NOT THE SPIRIT OF BALTIMORE BE FETTERED.

Baltimore's substantial, taxpaying citizens desire that the emergency caused by the fire be made the occasion for a permanent betterment of the city. They wish that the burned district be restored as speedily as possible and upon a plan commensurate with the potentialities. But should there develop, through impatience, an impression that there is likely to be hesitation and timidity on the part of municipal authorities and of others about seizing the opportunity courageously and without concern for trivial interests of any kind it may dampen the magnificent ardor which has been displayed since \$100,000,000 worth of property disappeared in flames.

Important fundamental interests in the ruined district are, of course, to be considered; whatever is done must be done in an orderly way and with due regard for law and for the principle of vested rights. But all of such facts should be viewed by individuals most immediately affected and by the officials charged with the tremendous responsibility of the moment from the lofty standpoint of the good of the whole community and the future greatness of

the city. It is no time for petty politics in action or in criticism, no time for personal selfishness and narrow-mindedness, no time for municipal parsimony and provincialism. Every unnecessary proposition tending to postpone the work of rebuilding or to narrow the broad plan for that rebuilding will have the effect of lessening the splendid enthusiasm with which the people of Baltimore have faced the disaster and of creating obstacles in the way of giving that enthusiasm practical embodiment in a business section with broad highways, reducing to a minimum the possibility of another such conflagration and guaranteeing against wasteful congestion in the arteries of trade and travel, and with handsome business structures reflecting the wide-awake, aggressive character of merchants and manufacturers prepared to press the advantages of the city as an industrial and commercial center. Suggestions of delay must be promptly suppressed. False notions of economy must be dismissed from mind. Those among us who are hesitating about an increase in the tax rate for a few years, or a temporary inconvenience for property-owners called upon to yield to the demands of the public welfare, should understand that the people of Baltimore are interested much more in what broad-gauge improvements will pay in the future than in what they will cost at the present, and that they are determined that Baltimore shall go forward and not retreat. It would be most reprehensible for circumstances to be allowed to develop that should in any way fetter that gallant spirit.

FOR KENTUCKY'S SURVEY.

Both houses of the General Assembly of Kentucky have passed a bill providing for a State Geological Survey. That is a return to the policy which between 1882 and 1892 wrought such signal service for Kentucky. During those years there was a Geological Survey doing effective work to the enrichment of the State by the attraction of investments in its mineral resources, but in the last-named year the Legislature failed to make an appropriation for the maintenance of the survey, and that failure has been repeated by subsequent Legislatures until the present one. The act just passed provides for a geological, topographical and agricultural survey of the State under the general direction of the Curator of the State Geological Department, who happens to be Prof. C. J. Norwood. He was associated with the old survey in field and office work and has for many years been State Inspector of Mines. With an appropriation of \$15,000 annually for two years at least, it is expected that he will be able to develop the work of the old survey, which was largely of the nature of a reconnaissance to such an extent as to demonstrate the importance of maintaining the survey permanently and upon a broader foundation.

THE WAY TO GET IMMIGRANTS.

Significant of the enlarged interest in immigration to the South is a bill introduced in Congress by Senator Simmons, of North Carolina, providing for the establishment in connection with the immigrant station at Ellis Island, New York, of a bureau of information to aid in the distribution of immigrants. This bill provides that the bureau to be created by the Commissioner-General of Immigration, under the direction of the Secretary of Commerce and Labor, shall furnish immigrants with oral and printed information and, where practicable, with display matter about the resources, the products, the physical characteristics, the prices of land of each State and Territory, the routes of travel and costs of transportation, the opportunities for employment in the various skilled and unskilled occupations, the prevailing rates of wages and the costs of living, and about other matters that may serve to enlighten intending settlers. Furthermore, it is provided that sufficient space and accommodations for informing displays shall be provided in the bureau for agents of each State and Territory, or for two or more States acting together, who may be appointed by the respective States and maintained by them. These State agents, subject to the supervision and control of the Commissioner-General of Immigration and to such rules as he may from time to time prescribe, and subject also to removal by him for sufficient cause, shall have access to all immigrants after they have been duly admitted, in order that they may offer inducements to them to settle in their respective States and Territories.

The idea of the bill is an excellent one. In the absence of any authoritative explanation of its purpose seems to be to give Southern States the means of diverting to themselves much of the immigration which has for more than half a century flowed to other quarters of the country to the benefit of the communities where they have settled. But there is primary objection to the plan in the power vested under the measure in the Commissioner-General of Immigration over the agents to be appointed by the several States, a power which, in improper hands, may defeat the very purpose of the bill. Again, practical difficulties present themselves in the provision for a species of competition within a limited area of Ellis Island among agents of different States struggling to secure desirable immigrants.

As a matter of fact, however well intended the plan of Senator Simmons may be, it would be well for the States of the South to depend upon their own resources and their own means for attracting immigrants. The fact that an intelligent expenditure through its State Bureau of Immigration of \$15,500 in eighteen months was accompanied by the settlement of more than 4000 persons in Maryland in that time reveals the possibilities in such work, which are emphasized by the move-

ment during the past few years of thousands of persons from the North and West to the South under the influence of progressive railroad missionary endeavors. While such efforts have been in the past directed largely upon individuals in other parts of the country who had only to realize the unsurpassed advantages of the South to make it their home, they have more recently expanded to those persons in foreign lands to whom the South was an unknown region or a misrepresented one. The expansion is an acknowledgment of the wisdom of the policy which built up the Middle West and the Northwest by immigration from abroad, the policy which renders the proposed bureau of information at Ellis Island unnecessary, inasmuch as the great majority of persons landing there have already determined upon their ultimate destination in this country. They have met the representatives of great railroad lines or of State immigration energies in their native lands and are well equipped with information about their future homes which could hardly be dislodged from their minds except by experience and not by rivalry of immigration agents in New York city. The best place for the operations of a State immigration agent seeking settlers from foreign lands is in those very lands.

THE SOUTHERN RAILROAD EXHIBIT.

A further study of the December, 1903, railroad statements issued by companies operating in the South and Southwest develops additional cause for gratification. Since the Manufacturers' Record several weeks ago made a comparison of figures reported for some of the lines, other railroads in those sections have published their returns for the month in question, so that a broader consideration of the subject can now be obtained. Statistics at hand show that the gain in gross earnings of the Southern roads, as compared with December, 1902, was 10.2 per cent., and in the case of the Southwestern lines it was 6.8 per cent., not so great a gain, but nevertheless very satisfactory.

Considering the state of the railroad business in other sections of the country, these reports from the South and Southwest are highly gratifying. The Commercial and Financial Chronicle, of New York, notes that seven trunk lines in the same month suffered a decrease of 18.5 per cent. in net earnings, and, while the drop in gross was not so great, it was nevertheless considerable, reaching \$659,844 in a total of over \$26,000,000, or 2.4 per cent. At the same time the Southern roads displayed a gain of 7.51 per cent. in net earnings and the Southwestern lines (including the Southern Pacific) 9.32 per cent. similar gain. The losses in net sustained by the roads in other sections were large, the anthracite coal lines dropping 20 per cent.; the lines in the Eastern and Middle States

24.8 per cent. and the Middle Western roads 4.5 per cent. The Northwestern lines, however, gained 5.4 per cent. and four roads in the North Pacific group 16.1 per cent.

Remarking upon the display for the month made by all the railroads, the *Chronicle* says:

"Aside from the Southern Pacific and the Union Pacific, there are few roads distinguished for large amounts of gains and these are mainly roads in the South, which section has been experiencing unwonted prosperity owing to the high price prevailing for cotton."

Lest this quoted remark might be misunderstood by readers not thoroughly familiar with business conditions prevailing in the South, the fact must be borne in mind that it is not cotton alone which is responsible for the remarkable development that is going on in this part of the country. The natural wealth of the section in iron, coal, timber, etc., besides its favorable climate and geographical advantages, has attracted and will continue to draw to it the attention of workers and capitalists elsewhere. Much of the South is new territory that was passed by in the westward rush of immigration, and is now being opened up because of its superior qualities which were once overlooked, owing to various conditions—social and political—formerly prevailing, but now passed away.

AN OFFICE TO BE ABOLISHED.

Because its candidate for the office of chief of the Maryland Bureau of Industrial Statistics was not appointed, the Baltimore Federation of Labor has reached the conclusion that the bureau is of no use to its organization, and has started a movement for its abolition. Without regard to the purely special reason for this movement, it should be taken in hand by the people of the State and pushed to success. The bureau, if we mistake not, was established as a sop to certain "labor leaders" in politics, and the contention of the Baltimore Federation, if correct, is an acknowledgment of a beautiful working out of poetic justice. Be that as it may, the Bureau, as it exists and has been conducted for several years, is a laughing-stock for persons who are acquainted just a little with the science of statistics and who understand how statistics may be employed to the advantage of the State. But that feature of it is of small moment. It is as nothing compared with the menace in the bureau to the material welfare of the State. More than one of the incumbents of the office of chief of the bureau has acted upon the theory, rather erroneous, that the industrial interests of Maryland were limited exclusively to a comparatively small minority of the individuals upon whom the industrial development of the State depended, and instead of presenting in their annual reports facts and figures showing the opportunities in Maryland for labor and capital, they have been occupied in making known and, under the circumstances, giving undue importance to facts against which conservative capital and self-reliant labor rebel. Instead of aiding Maryland, the bureau has tended to be a block upon the wheels of its progress. It should be abolished by all means and the thousands of dollars which are annually worse than wasted upon the salaries of its force should be added to the appropriation for the State Bureau of Immigration, which is doing good work for the upbuilding of Maryland.

AN Isthmian CANAL.

An Isthmian canal seems now assured. By the ratification of the treaty with Panama by the United States Senate on February 25 the country has been committed to a recognition of a fact and has been placed in a path from which there can be no withdrawal. And now, though private enterprise has failed in successive attempts, the Government of the United States will be expected to succeed, to the end that within a few years the commerce of the nations shall be flowing through an Isthmian channel.

The long-continued efforts to pierce the narrow link of land which binds the Americas together have been marked by financial and engineering failures, by business and political scandals and by bitter controversy between the advocates of the various proposed routes across the isthmus. In the end the American Government has sought a way out of the confusion, just as American skill will find a path through the maze of engineering problems which will confront the constructors of the canal.

Whatever differences of opinion there may have been as to the merits of the various routes that have been so ardently advocated, there has been no question as to the necessity for the construction of a canal and the expediency of control by the United States. There have been differences only as to details, as to the choice of routes and the methods of determining them; as regards the general proposition there has been practical unanimity. Now that the basis for differences has been destroyed, through the action of the Senate, there must be united efforts to bring the great undertaking to an early and successful completion.

To every section of this country, and to all the world as well, will come great advantage from the shortening of the world's routes of trade. To the United States there will be the double benefit of shorter routes to South America and the Orient from the eastern and southern seabards, and the linking together by water of our own Atlantic and Pacific coasts. To no section of this country should this undertaking become of more material importance than to the South, as its closer proximity to the Isthmus will give it proportionate advantage in its use of the short cut to the Pacific.

The problems of organization, sanitation, construction and operation will afford ample field for the best engineering and administrative ability the world can supply. The requirements of materials, supplies and contractors' plant will form items of no small importance to the manufacturers of the United States, and the beginning of this work will give appreciable impetus to numerous lines of industry.

Few events in the history of our country have so emphasized the position of the United States in world affairs as the development of the whole canal project. The construction of this great waterway will be a triumph of skill and engineering ability such as history has not yet recorded.

BANKS SHOW THE SOUTH'S GROWTH.

A comparison of the statistics presented in the digest issued by the Comptroller of the Currency on the reports of the condition of national banks on January 22, 1904, with the figures for February 6, 1903, shows that the number of national banks in

the South has increased 93 during the year, this being greater than the gain made in the eastern section of the country, which was 63; while the New England States showed a decrease of 16. It is only exceeded by the Middle Western States, with a gain of 151, and by the Western States with an increase of 94. The Southern States also show an increase of 11.4 per cent. in national bank capital, which is a greater gain in percentage than any other section except the Pacific States and the islands. In individual deposits the South shows the greatest percentage of gain of all sections, with 10.3 per cent. Its gain in total resources is 14.3 per cent., which is also greater than the percentage of increase in that particular reported elsewhere.

Commenting upon this, the Washington correspondent of the *New York Journal of Commerce* says:

The Southern section on the whole shows the greatest expansion of business. The increase of 14.3 per cent. in aggregate resources and of 10.3 per cent. in individual deposits displays a condition that could only be brought about by general and widespread prosperity throughout the section. The high price of cotton has doubtless had much to do with bringing about this general prosperity and the expansion of banking business has naturally been greater in the cotton States, though it has been contributed to by States like Virginia, West Virginia, Kentucky and Tennessee, where little or no cotton is produced.

These conclusions are in accordance with the facts to which the Manufacturers' Record has directed attention again and again, namely, that the prosperity prevailing in the South rests upon a broad and solid foundation and is not dependent alone upon the condition of the market for the great staple, cotton, in the production of which the South is preëminent.

THE ANTI-INJUNCTION AND EIGHT-HOUR BILLS.

Congress is called upon again to consider two bills which justly failed of passage during the last session. These are the so-called "Anti-Injunction Bill" and "National Eight-Hour Bill," both of them fathered by a minority of the labor interests of the country, and both representing the prevailing desire on the part of organized labor to gain advantage over employers, regardless of the constitutional rights of the people as a whole. The one bill seeks to compel employers to reduce the hours of labor; the other aims to destroy the employer's strongest defense against coercion by dissatisfied workers.

By the united and determined opposition of manufacturers who realized the dangers of such legislation the passage of these bills during the last session was prevented; but the attempt to make these laws has been renewed by the lobbyists of the labor organizations, and employers must come forward again in self-defense. The scope of the proposed laws is so broad and their influence would be so far-reaching that hardly an industry in the country would escape the evil effects that would follow such curtailment of the moral and lawful rights of employers.

It is necessary, therefore, for every employer of labor to acquaint himself with the provisions, purpose and probable effect of these two bills. This done, the proper course of action will suggest itself to every employer, namely, to oppose with vigor and determination the passage of these bills. The "Anti-Injunction Bill" is brief, so brief that it can be quoted here in full:

Be it enacted, etc., That no agreement, combination or contract by or between two

or more persons to do or procure to be done, or not to do or procure not to be done, any act in contemplation or furtherance of any trade dispute between employers and employés in the District of Columbia, or in any Territory of the United States, or between employers and employés who may be engaged in trade or commerce between the several States, or between any Territory and another, or between any Territory or Territories and any State or States or the District of Columbia, or with foreign nations, or between the District of Columbia and any State or States or foreign nations shall be deemed criminal, nor shall those engaged therein be indictable or otherwise punishable for the crime of conspiracy, if such act committed by one person would not be punishable as a crime, nor shall such agreement, combination or contract be considered as in restraint of trade or commerce, nor shall any restraining order or injunction be issued with relation thereto. Nothing in this act shall exempt from punishment, otherwise than as herein excepted, any person guilty of conspiracy for which punishment is now provided by any act of Congress, but such act of Congress shall, as to the agreements, combinations and contracts hereinbefore referred to, be construed as if this act were therein contained.

Briefly stated, the effect of such a law as this would be to legalize strikes, boycotts, picketing and other acts of conspiracy or intimidation of employers or fellow-workmen and to deprive employers of the protection of the courts against such acts of oppression and violence. This would be a reversal of all precedents which have been established by the courts in the treatment of controversies between labor and capital, and would place the great industries of the country at the mercy of irresponsible leaders of organized labor. The attempt to enact such a law as this is a blow aimed at fundamental rights and liberties of the people, and it is not to be believed that Congress can be deceived as to the real purport and the sure results of this movement.

The eight-hour bill, though savoring less of anarchy, is no less an invasion of the rights and liberties which manufacturers enjoy as citizens of this republic. Ostensibly, this bill seeks to restrict to eight hours per day all labor employed by manufacturers upon work for the Government. First of all such a proposition is in conflict with common sense and good business judgment. The immediate result of such a limitation of working hours is to increase the cost of the product of that labor, and there is no conceivable reason for the enactment of a law the prime purpose of which is to make the Government pay a higher price for everything it buys. The Government should have the right to buy goods and have work done as cheaply as any individual or corporation.

The second objection to this proposed law is that, while its provisions are directed specifically toward contractors or manufacturers engaged on Government work, its real purpose is to compel all employers of labor to adopt an eight-hour day. There are few, if any, establishments engaged upon work for the Government to the exclusion of all other business; and as it would be manifestly impracticable in nearly every case to have an eight and a nine or ten-hour day in the same plant, the result would be to run the entire establishment on the eight-hour basis or else exclude Government work, unless the latter could be segregated in a separate plant.

Nothing but demoralization and injury to employers and added expense to the Government could result from the operation of such a law as is proposed. Its true purport, as a means of coercing manufacturers into the

general adoption of the eight-hour day, is generally recognized, and on this ground, if on no other, the bill deserves the determined opposition of manufacturers in every branch of industry and in every section of the country.

Organized labor is strongly supporting both of these bills, and manufacturers should act in concert and with method in their resistance to these attacks.

EDWIN F. ABELL.

Wherever the Baltimore Sun is read and known the announcement in its issue of February 29 of the death of Edwin F. Abell was taken as one of the most distressing facts in connection with the heavy losses which Baltimore has sustained. The buildings which disappeared in flames will be replaced by handsomer ones. The business interrupted will be resumed upon a larger scale. But there cannot be another warm-hearted, generous, public-spirited Edwin F. Abell. Devoted to the interests of his native city and with his affections centered in the newspaper which has wrought so signally for the city's advancement, he could not survive the great disaster which had involved in its destruction the establishment to which he had given more than forty of the best years of his life. The shock of the fire was too severe for his constitution, already enfeebled by disease. The last of the sons of Arunah S. Abell, trained under his immediate eye, impressed with his remarkable journalistic personality and associated with him in the making of the Sun, Mr. Edwin F. Abell was the link between the founder of the Sun and the three grandsons, to whom its conduct has now been committed. Upon one of these, Mr. Walter W. Abell, had devolved in the past year or two the details of the undertaking. He has been assiduous in acquainting himself thoroughly with all the features of the work, and he will be the leader in maintaining the traditions and policy of the Sun.

SUSTAINING BALTIMORE IN ITS CRISIS.

In a letter to the Manufacturers' Record Mr. L. B. Keene Claggett, attorney-at-law, Baltimore, writes as follows:

Permit me to congratulate you on the exceptionally strong and signally appropriate article, entitled "The Right Way to Help Baltimore," contained in the Daily Bulletin of the 15th inst. I can but feel that all who read this appeal must endorse, unqualifiedly, every word therein contained; and resolve with greater determination to put forth every effort to help Baltimore recover from the staggering blow so suddenly dealt her. One cannot too highly estimate the great value of the far-reaching benefits resulting from an infusion of the sentiment so forcibly brought out in your paper, into the thoughts of those citizens to whom Baltimore must needs look for assistance in this her time of great distress. It is at crises like the one Baltimore is now experiencing that citizens are brought to the full realization of the proper value and the adequate appreciation that should be placed on such well-edited organs as the Manufacturers' Record for conveying the proper sentiment to—and in so doing, creating the same in—the citizens of Baltimore; citizens who have made her the pride of the South, and who will, actuated by that same sentiment, rebuild her machinery of trade, differentiated only from that temporarily destroyed, by a size and capacity increased in proportion to the visible daily increasing growth of business throughout the South, thereby adding to the reasons that, for a hundred or more years, have so worthily made her the South's pride.

The people of Baltimore in particular, and the South in general, owe to the Mann-

ufacturers' Record a great debt of gratitude for the timely, appropriate, and, I believe, materially helpful editorial.

DO NOT BLOCK THE WABASH.

A nasty phase of affairs at the State capital of Maryland, where at this time legislative energies should be free to work for the recuperation and advancement of Baltimore, is the development of opposition to the plans of the Wabash system to make its Eastern terminal on the Baltimore water-front. There is absolutely nothing in the railroad situation here to justify such opposition. Progressive business men of all shades of opinion are united in the strenuous desire to have the new line. It will not require much acumen on their part to fix the responsibility for any move calculated to impede and delay the Wabash in reaching its goal, and, under the influence of the spirit now prevailing here, they may be expected to lead a public sentiment which will make it impossible for any person who, acting in his individual capacity or professionally, shall be a party to the delay to hold place among the decent men of the State.

W. D. Haas & Co., of Bunkie, La., write to the Manufacturers' Record as follows:

We appreciate the fact the Manufacturers' Record is doing more for the South than any other paper published, and we are glad to be one of your subscribers.

Trade with Spain.

Mr. J. S. Hernandez, 40 Aribau, Barcelona, Spain, writes to the Manufacturers' Record that he is in fine condition to introduce throughout Spain not only machinery, but other industrial products, for which he has agents in every large Spanish city and in many smaller towns. He says that he does not care to manage foreign business, but rather to solicit trade and to make sales on commission, and then only for solid houses of undoubted integrity. He adds that, should a firm call upon him to act for it in a matter outside of his line, he would hold himself and his colabors subject to its direct orders. He says that correspondence should be addressed to him in Spanish, and not in French, and that prices of goods should be named in pesetas, and by no means in francs. Mr. Hernandez writes that many American firms have sent him letters and samples addressed, because of a mistake in an advertisement, to J. G. Hernandez instead of J. S. Hernandez, and he should like this explanation of their failure to find him to be made.

Angel S. Fidalgo, 39 Aribau, Barcelona, Spain, writes to the Manufacturers' Record that he desires to establish with American firms relations as a commission merchant or commercial agent.

Flour Through Galveston.

At a conference of representatives of flour mills of Kansas, Indian Territory and Oklahoma, and of the exporters and ship agents of Galveston, it was agreed that, in consideration of the purpose of the mill men to turn their export business toward Galveston, the port should provide such facilities for the storage of flour as would prevent deterioration while waiting for export. The first shipment of flour made under this agreement, 48,000 sacks, reached Galveston last week.

Industrial agents of various railroads in the Southeastern States will meet at Chattanooga on March 9 to further the cause of immigration.

Acuteness of the Cotton Situation.

By HON. WILLIAM C. LOVERING, of Massachusetts.

I should like to offer a few remarks upon what seems to me to be a very critical situation of one of our great industries to-day. With a crop of hardly more than 10,000,000 bales of cotton this season we shall be facing a cotton famine. Next to food crops of the world, the cotton crop holds the most important place.

The wool crop, the flax crop and the silk crop might be total failures and not carry with them so much discomfort and hardship as the failure of the cotton crop.

Cotton has come to be a more important article of clothing than even wool. The articles and purposes for which it is used have multiplied within the last score of years to a degree which would amaze the uninformed or casual observer. Even when found combined with wool it is generally to the advantage of the manufactured article.

It must not be thought that, because good cotton is mixed with wool, the joint product is a shoddy fabric. True, it is cheaper, but, properly manufactured, it is not less useful, less enduring or less lightly.

Mixed goods of this kind are not to be classed with what are called "shoddy." Shoddy manufactures are generally made from torn-up woolen rags which have already served a purpose and have been cast aside. Such goods are not to be compared with those made of wool and cotton mixed.

It will be seen, therefore, that a short crop of cotton is a great hardship. Its cheapness is not alone its greatest recommendation, although the fact that it is ordinarily the cheapest known fiber brings its manufacturers within the reach of every one.

More people in the world are clothed entirely in cotton than in wool or any other material. The price at which cotton is being sold to-day restricts its use in many fields.

I believe the day is not far away when the cotton belt of this country will have to produce 15,000,000 bales of cotton. I believe there is no place in the whole world where cotton can be grown so cheaply and to so good advantage as in this country, and while I regret that the present price will bring distress to the spinning industry, I congratulate the great Southern neighbors upon the great wealth it is bringing to the planters.

The cotton manufacturers of the world are prospecting everywhere for new cotton fields. England, France, Germany and Russia are using every endeavor and are subsidizing the growth of cotton wherever there is the least promise of a crop.

While it may seem impossible that the supremacy of the Southern planter shall be wrested from him, it is not well to ignore these efforts. The South should stir itself to raise all the cotton it can, rather than to be devising plans to curtail its production.

The highest price is not always an unmixed blessing. It stimulates production elsewhere and restricts its use. The cotton States can, if they will, grow all the cotton the world needs, and for all time Cotton may be King, so long as he exacts only a reasonable tribute from all mankind.

*From a speech delivered in the National House of Representatives, February 29, 1904.

Cotton is a tender plant, and has its enemies. It is subject to the vicissitudes of the weather and the ravages of parasites. I believe the Government should spare no expense to study and exterminate the boll weevil pest. I should favor any reasonable additional appropriation for the purpose.

The value of last year's cotton crop, including cottonseed, was \$365,000,000, and it is confidently estimated that the present crop of cotton and cottonseed will yield a value exceeding \$625,000,000. When it is taken into account that the South adds still further to the value of its great staple by spinning 2,500,000 bales of cotton and by making oil and other by-products from the cottonseed, we begin to form some idea of what a source of wealth cotton is to the Southern States and to the whole country.

It is said that the State of Texas alone can grow the cotton crop of the world. Probably the only obstacle to growing a 15,000,000-bale crop of cotton is the absence of labor in the right places at the right time to pick the crop; and this brings us to the consideration of a question which must sooner or later engage the attention of the planters of the South.

Accurate statistics of the growth of cotton in Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Texas show that in 1876, 40 per cent. of the total crop was made by whites and 60 per cent. by negroes, whereas, in 1900, statistics show actually the reverse—namely, 60 per cent. of the cotton was made by the whites and 40 per cent. by the negroes.

But the most interesting phase of the question is in connection with the relative increase of the white and colored population of the South, as shown by the census of 1900. Taking the States of Texas, Mississippi, Georgia, Alabama, South Carolina, Tennessee, Florida, Missouri, Arkansas, Louisiana, North Carolina, Virginia and Kentucky, we find that the white population in 1880 was 5,576,933, and in 1900 was 8,772,950, an increase of 57.3 per cent. The population of the negroes in the same States in 1880 was 4,409,210, and in 1900 was 6,061,748, an increase of 37.5 per cent.

The cotton crop of 1880 was 5,721,026 bales. The crop of 1900 was 9,250,303 bales, or 61.7 per cent. increase. I ought to say right here that I have only taken what are known as the cotton-growing counties in these States, which number 749, and for the purpose of comparison have taken only those same counties at each period.

The white population in these States in 1900 was 59.1 per cent. of the total, and the negro population was 40.9 per cent. of the total, while in 1880 the white population was 55.8 per cent. of the total, to 44.2 of the negro population, showing plainly that the negro population has relatively decreased as compared with the white population.

While the tendency of the whole population is to become more urban and less rural, it is more marked in the case of the negro than in the white. The tendency of the negro to the cities is greater than that of the white. If this relative increase of the white population to the colored continues, we will find in another score of years the white population in the neighborhood of 65 per cent. of the total to 35 per cent. of colored.

To raise 15,000,000 bales of cotton will require an increase of laboring population, and the South must look to immi-

gration to supply it. Immigration is not necessarily from abroad, but from other parts of the country; and in immigration, I believe, will be found the ultimate solution of the race question.

THE TRAVEL TO MEXICO.

Wealthy Tourists Prepared to Invest in Industries.

[Special Cor. Manufacturers' Record.]

City of Mexico, February 22.

Just now the tourist season is on in Mexico, and Americans with ample spending money are here in plenty. The class who usually make the trip have at their command capital, the long journey being made, in most cases, for the double purpose of recreation and investigation of the fields for investment in the Republic. It is worthy of note that the report which each visitor makes as a result of his more or less extended investigations throughout the Republic, whether with regard to mining, manufacturing or general investment in industrial lines, agree in almost every detail. Agriculture, mining, manufacturing and railroad developments are now being carried on a scale undreamed of but a few years ago.

The Mexican Government, true to the national policy mapped out the year succeeding President Diaz's occupancy of the presidential chair, encourages enterprises of all kinds which give reasonable promise of benefiting the country, by direct financial aid and liberal concessions of an equally practical character. Harbor improvements are now proceeding on a very extensive scale, while a number of projects equally important and of a maritime nature, are contemplated for seaports on both coasts of the Republic.

Trunk railroad lines now traverse almost the entire length and breadth of the country. One can travel from any one of several railroad terminals along the United States border clear through the Republic to the Isthmus of Tehuantepec, and from ocean to ocean, with as much comfort as can be obtained on a trip from New York to Chicago or San Francisco. Branch railroad lines are striking off in every direction. New mining fields, rich in minerals of all kinds, valuable timbered lands and productive tropical regions are being opened up for development. American investment interests in Mexico are represented by an enormous capital—of the \$800,000,000 of foreign capital invested in Mexico, more than \$500,000,000 is from the United States—but the possibilities which await the investment of further capital are much greater than those the past has demonstrated, and it is safe to assume that the adoption of Mexico's proposed new financial policy, as outlined by Secretary Smiatur of the Treasury, will mark the beginning of an investment era in all lines unprecedented in the country's history. Development of Mexico's resources has but begun, and notwithstanding the amount of capital referred to already invested, the Republic is starving for lack of adequate funds.

Manufactories for flour and all varieties of edible products, clothing material, tanneries and many more staples of civilization are in large and growing demand. The high cost of fuel for manufacturing purposes in many parts of the Republic is offset by the opportunities which great natural waterfalls offer in every State of Mexico for the application of electrical forces. Mexicans are realizing the value of electricity for power and illuminating purposes, with the result that every town and village in the country of any pretensions is clamoring for the installation of electric

plants. Developments along electrical lines, whether in mining, traction or illumination, in the Republic of Mexico, are beyond the reach of even approximate estimation.

It is a realization of the foregoing conditions which has attracted American investors and which gives promise of increasing their number in the near future manyfold.

THE IRON MARKET MENDING.

Inquiries Have Materially Increased at Birmingham.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., February 29.

There can be no doubt that a better feeling pervades the market, and the low prices that have been quoted are now a thing of the past. In this opinion, however, there is not a unanimity of feeling. There is an element in the trade whose pessimistic feelings prompt them to look with suspicion upon any change that smacks of any but a temporary advantage. But when the sales made clearly point to a hardening of values, there is no use to fight against the inevitable.

The inquiry has materially increased, but the sales have not increased in proportion. They rarely do at the commencement of an upturn. But it looks like business is in sight when one leading interest reports that for one day their inquiries aggregated fully 40,000 tons, and that their sales for the week were greater than their output. All the interests cannot make such a report. Some report an increase in inquiry, developed in the latter part of the past week, while others report a rather pessimistic condition. But, taking an average of the reports and a conservative view of affairs, there is only one conclusion, and that is that the iron market is mending. The market is yet on the basis of \$0.50 for No. 2 Foundry, with sales during the week at \$0.25, and in a few cases as low as \$0. But the sales at the inside price were limited in volume and in no sense could be called a fair market quotation, any more than the sales made at \$10 and \$0.75 could be so characterized. And there were sales at all these prices during the week. Some of the low-priced sales were for account of outside interests; but as the sales were on Birmingham basis, this district gets the credit of the sales. A sale was reported of 2500 tons on the basis of \$0.50 for No. 2 Foundry. In the early part of the week there was a sale of 7500 tons of basic iron at \$10 for near-by shipment. There was a sale reported of No. 1 Soft at \$10.25, and some No. 3 Foundry at \$0 and \$8.50; and, in one case, this grade commanded a price that netted \$0.25 on cars here. Gray Forge was very variable, and sold from \$8.50 down to \$8.25, and then to \$8, and gossip had it even below this price. But with the market as nervous as the iron market has been, it is simply impossible to corroborate the rumors permeating it. The figures given make the irregularity of the market very apparent. The sales agent in a Western market, of an influential interest here, was here last week and brought with him orders for 9000 tons on a basis of \$0 for No. 2 Foundry. He returned with the orders unfilled. Not one was accepted. In the past few days strenuous efforts have been exerted by buyers to get in at or about \$0 for No. 2 Foundry, and every one of them has scored a failure. Very encouraging reports come from some markets of a buying movement that is on the eve of materializing, and sellers are inclined to pin their faith to them as being correct. They can't see why

everything into which pig iron enters should show a healthy condition and that alone be depressed. It usually happens that pig iron sets the pace for the finished product. But just now finished product shows a healthy condition in contradistinction of the pig iron market. It now appears as if the normal conditions are only a question of a short time before realization.

The cast iron pipe works continue to report a very satisfactory condition of business, with order books pretty well filled up and prospects of new business as good as heretofore reported. On some sizes there is a pulling out of the market, and in others there has been an advance asked. The base price asked now is \$22 for six-inch. This is understood to be only an approximate guide for buyers. In the present condition of the market it is simply impossible to give figures that can be taken as an unerring guide.

At the steel mill things are now working smoothly, and there are orders on hand to keep them going for some time to come. The thorough overhauling of the plant has put it in prime condition, and in efficiency it has been greatly improved.

The Bessemer soil-pipe works has made a shipment in the past few days of their manufactured product to China, and they have done this in the face of a pretty sharp competition.

An important deal was concluded the past week, in which the Ivy Leaf Coal Co. changed owners. The Messrs. Erskine Ramsay and G. B. McCormack bought a controlling interest in the company, and will operate it. The capacity will be increased very materially. At present it is about 2500 tons, and it will be made to double this in a comparatively short time. These same parties are largely interested in other companies that are in operation, and their combined interests will, in the course of 12 months, be turning out 12,000 tons of coal daily. There are some other deals on the tapis that are not yet ready for publicity. The Ivy Leaf Co. covers 12,000 acres of land, and is one of the best coal producers in the district.

Inquiry made of the various shops as to the prospects for new business has elicited only favorable reports. They all report that in the last two weeks there has been a material improvement in inquiry, and some in the actual business offered and accepted. While the amount that has come into sight has been gratifying, it has not been great enough to create any furor. More could be taken on without squeezing capacity.

The No. 3 Furnace which was put in blast on February 17 by the Republic Co. has been doing fine work, and although it is not yet in furnace vernacular, hot, it is turning out from 275 to 300 tons daily, and very little of it low grade. Unless there is an improvement in the iron market, we will likely see some furnaces in the position of innocuous desuetude. The average profit at prevailing prices is mighty near nil.

J. M. K.

ONE VIEW OF BATSON.

Phases of Activities in the Latest Texan Oil Field.

[Special Cor. Manufacturers' Record.]

Beaumont, Texas, February 19.

After many days of travel, over many miles of territory west of Batson and north of Houston, prospecting for oil signs, the writer took a two-hours-and-a-half trip by rail from Beaumont to Saratoga, now the southern terminus of a branch of the Santa Fe, running from Bragg, on the main line. Travel from

Saratoga to Batson is by hack over a road so rough and new that one travels not faster than a walk for about an hour and a half. There are many heavily loaded wagons in the road. Pipe, boilers, engines, bricks, tanks and every conceivable thing needed for the development of a large pool of oil are to be seen on the way. Many times the heavily loaded wagons come up in a chuck-hole or against a tree, the whole road being cut zigzag through a forest of heavy timber to the edge of the prairie on the west. It certainly requires art to pilot teams of four or five horses or mules through this wilderness, but usually one driver, sitting on top of a boiler loaded upon a heavy truck, will hold all the ribbons, and the animals go in and out among the trees with precision. It costs from \$90 to \$100 to carry a 30 horse-power boiler from Saratoga to Batson, and about 40 or 50 cents per hundred pounds for other freight.

When the traveler comes into the open country he is greeted by a sight to be seen only in real, up-to-date oil excitement. Everything is hustle, and so many changes have been made since we were last there, three weeks ago, that we could hardly locate ourselves. From one point we counted 65 derricks. Some of these were over producing wells, others were waiting for drilling machinery, and many were in different stages of the waiting process. Later on we counted in the woods enough material to make up a total of at least 75 rigs. Can any one conceive of the hustling required to make all this show, when it is remembered that the field is scarcely more than three months old? At the beginning, Sour Lake, sixteen miles to the east, was the nearest point by rail. Liberty, eighteen miles south, was also accessible. The new Santa Fe branch to Saratoga was opened on December 24.

What may be said of this new oil field? To the writer's mind it resembles Spindle Top. There is a distinct rise in the land from all sides until, in the center of the field, there is a total rise of from 10 to 15 feet from the bayou on the east. In what appears to be the center of the field the surface is as level as a floor, but toward the west, where the timber is, it slopes gradually to another level. On the northwest there is a decided drop from the Mary Ellen well, and quite a number of gas mounds or "oil blossoms." To the south lie the various town sites, and here are the many real estate offices, groceries, clothing stores and restaurants. Many of the places of business are simply tents, and, indeed, shacks of all kinds are numerous.

If a stranger arriving in this new Oil-Dorado looks prosperous or likely to be an investor in territory ranging from a sixtieth of an acre to 2000 acres or more, the real estate man is after him with all the allurements of blue-prints and "indications," at any price from \$50 per acre two miles away to \$10,000 per acre "close in."

May we illustrate a proposition we figured out while there? Land in a certain section is being offered at \$3000 per one-sixth of an acre, with a guarantee to furnish tankage for the oil produced from a well on the land for the term of six months for one-half of the oil. Now, being a contractor, we figure thus:

One-sixth of an acre.....	\$3000
Rig and drilling of well....	5500
Tanks, etc.....	1000

Total\$9500

The \$3000 simply means bonus of this amount and one-half of the oil as a royalty, as the well owner gives this one-half for storage for six months. At the

end of six months the chances are that the well will be drained. At the price usually obtainable for Texas oil we would have to produce 80,000 barrels to get 40,000 barrels for ourselves, representing the return of our investment. Will one-sixth of an acre produce this much oil? Well, it all depends. If a well of the size of some of the Batson producers were struck, certainly it would. But if we only have one-sixth of an acre and some one else bags the other five-sixths, and probably at least six other wells get down to the pay streak about the same time as ours, on the same conditions of storage, we must collectively produce six times 80,000 barrels of oil—480,000 barrels—to pay for the six wells on one acre of land.

While this field is not as yet as thickly drilled as was Spindle Top or Sour Lake, there is a string of holes on adjoining properties. Why will the men go on drilling so close that none of them will get his money back? To be sure, it benefits the supply men, labor, etc.—if all bills are paid. If not, then some one must suffer. There is no doubt that there will be a large production from this field, but will not the limit soon be reached? We predict that it will not extend beyond two miles.

We have traveled over the whole wilderness for forty miles west and northwest of Batson, and believe that there is room for many more pools similar to Batson; but we cannot see any profit in drilling on an acre "close in," as they say here, not owning a pipe line and storage of our own. What can one do with his oil? Simply take what is offered or shut in his well and allow his neighbor who has facilities for handling oil to take it out from under his little acre while he sleeps. There is no law to prevent this.

The waste gas is now being burned, to prevent the many accidents formerly experienced here. Enough gas is being wasted to-day at Batson to supply every furnace and residence in the city of Beaumont with fuel, and oil is used as fuel for the boilers in the field. Of course this use of oil helps consumption, but to the writer it does not seem to be economy. The Guffey people are now drilling 20 wells, making them without doubt the heaviest producers and operators in the field. In order to provide tankage and pipe-line facilities an army of men are employed and trainloads of supplies are needed to keep up with the drill.

One who has traveled from New York State south through the various oil fields cannot but ask the question, Is this everlasting rush to get the oil to the top of the ground, that the Maker of the world doubtless put in Mother Earth for the good of humanity, wise? No place on earth has been butchered as have Spindle Top and Sour Lake. No doubt Batson will repeat the process.

W. R. OSBORNE.

IT WILL NOT LAST ALWAYS.

But the Present Facts About Batson Are Striking.

[Special Cor. Manufacturers' Record.]

Beaumont, Texas, February 27.

Batson's importance as an oil field, and its influence upon the petroleum industry of the country, can hardly be denied now that it has been announced that the crude product of this new Hardin county pool will refine 40 per cent. illuminating oil and 5 per cent. gas naphtha. It is quite true that the Pennsylvania, Ohio and Indiana crudes contain a higher percentage of light oil than the Batson product, and it may also be true that the quality of the illuminating oil obtained

from the Northern crudes is better than any yet discovered in Texas crudes.

It is difficult to convey an accurate idea of the immense production of the Batson wells without creating the impression that their capacity is greatly exaggerated, yet it is a fact that from two wells in this field deliveries of from 25,000 to 28,000 barrels a day are being made. These two wells are owned by W. E. Brice, who has had a lot of bad luck in the Texas fields, but he is certainly experiencing a change of fortune at Batson.

Twenty-seven wells have been completed at Batson. It is said that not a dry hole has been drilled in the field. One of the most conservative operators in this region, a man with a Pennsylvania training and who hates misrepresentation or exaggeration with a healthy hate, surprised the writer with the statement that if the Batson wells were turned on they would not do less than 150,000 barrels in 24 hours. This same gentleman said that deliveries of 80,000 barrels a day are now being made from Batson wells. This estimate is probably too conservative; but better too conservative than too liberal.

Other operators who have reliable information—it is a part of their business to get it—place the field's capacity at 175,000 to 200,000 barrels, and the actual deliveries of oil at from 105,000 to 125,000 barrels a day.

It is not much wonder that there is variance in the estimates. The representative of one company operating extensively at Batson says that he knows his company has two wells that are good for 1200 barrels each per hour, or at the rate of 28,800 barrels per well every 24 hours. These wells are not allowed to flow to their capacity, but tests have shown the production stated.

It is far from the writer's purpose to make the new field appear bigger than it really is. Nothing is to be gained by trying to enlarge upon the facts. Yet, when the facts are surveyed coldly and disinterestedly, it is very difficult for the man up North who has not seen the development of the Texas fields to realize that he is not reading a fairy story, a boom write-up or the prospectus of a 10-cents-a-share gusher company.

Batson's big production is not going to last always. Everybody knows that. But while it lasts it is the biggest thing since Spindle Top's best day, and it is more important than Spindle Top, because there is more than twice as much illuminating oil in the Batson crude as there is in the product of the older field. It is stated that not more than 18 per cent. illuminating has been obtained from the Spindle Top crude. Sour Lake crude runs about the same, as do Jennings and Saratoga, according to various authorities.

A remarkable feature of the Batson development has been the activity displayed by the J. M. Guffey Petroleum Co. The first Batson well, drilled into the shallow sand, came in October 31. That night and the next day and the next night Guffey workmen were busy transporting lumber and machinery to the Riley lease, and by the afternoon of the second day after the first well was brought in, the Guffey rig was working. On December 6 a blowout occurred in the Riley No. 1, indicating the presence of a heavy gas pressure. On December 19 the first gusher on the Paraffine Co.'s land came in, and the world knew that there was something unusual doing in the Hardin county woods. The Riley No. 1 came in on January 3. Since that time the Guffey people have brought in six wells at Batson; they are drilling 15,

and have 20 additional locations made, with derricks up and machinery moving in. It is impossible for the company to handle the product of even one of its largest wells, but in pushing development the day of pumping—a day that comes to all oil fields—is being borne in mind, and when it does get down to a pumping proposition, the Guffey Co. will have a long lead over all other operators. Work is being rushed on the second Guffey pipe line to Saratoga. The one now operating is carrying about 700 barrels an hour.

Estimates of the amount of earth-tankage completed and being constructed to hold Batson oil place it at from 3,500,000 to 4,000,000 barrels. About 1,500,000 barrels has been completed. Eight hundred teams are at work excavating for these reservoirs. Some of these "scoops" were so hurriedly and crudely made that they are leaking hundreds of barrels a day, which is ditched into the bayou and there burned.

Shipments of oil during the month of February have been up to the average. From the 12th to the 25th, inclusive, 14 days, 316,683 barrels were shipped from Port Arthur, of which 191,969 barrels went to the Standard Oil Co. at Eastern stations. From the 13th to the 23d, 11 days, 196,435 barrels were shipped from Sabine Pass, of which the Standard received 121,000 barrels and the Sun Co. most of the remainder. Of the shipments to the Standard from Port Arthur, 18,000 barrels were solar, 500 barrels lubricating and 1000 barrels asphaltum, the balance being crude. The Sabine shipments to the Standard consisted of 82,000 barrels of solar oil from the Security Refinery and 39,000 barrels of crude from the Higgins Oil and Fuel Co.

The shipments from Port Arthur and Sabine Pass from January 1 to February 25 have amounted to 1,400,377 barrels. Rail shipments have not been so heavy. From Sour Lake, in the period from February 8 to 24, inclusive, 971 cars were shipped. From Beaumont, via the Southern Pacific, 126 cars in the period from February 8 to 25, inclusive, and from Jennings, in the same period, 172 cars. The Chicago-Jennings No. 2 well at Jennings is still flowing.

HOLLAND S. REAVIS.

ACTIVITY IN TEXAS.

Business on a Better Basis Than a Year Ago.

In a letter to the Manufacturers' Record, Mr. William R. Hamby, cashier of the American National Bank of Austin, Texas, writes:

"With a large grain crop and a fairly good cotton crop in 1903, sold at attractive prices, the farmers in Texas are in better financial condition than for several years past, and but for the ravages of the boll weevil, our cotton crop for 1903 would have been the largest in the history of the State. While it is too early to predict the results of crops for 1904, either in yield or prices, yet from present conditions we think the outlook encouraging for business generally, except for cattle, which is one of our largest and most important industries. The low price of cattle the last year or so has had a depressing effect upon that business. In our city, and as far as our information extends through other cities of the State, there seems to be activity in building operations, municipal improvements and general trade. We hear of many new industrial enterprises, including new railroads and the extension of old lines in various portions of Texas. We believe we are within conservative lines when we say that business in this State is from 20 to 25 per cent. better than at this date last year."

FOR IMMIGRATION.

Natural Advantages Awaiting It in Louisiana.

William Polk & Co., representing at Alexandria, La., the Missouri Pacific Immigration Bureau, writes to the Manufacturers' Record, with reference to the outlook for the South, as follows:

"The opportunities are still numerous for all branches of industrial development. Her uniform climate makes life worth living in a natural home for agricultural pursuits. What the South needs to-day is a population. As an illustration we cite the State of Louisiana, which offers, especially to those engaged in agriculture, greater opportunities than any section of these United States. Her lands, which have been built up by the laws of evolution, to-day have a soil of fertility that is unequalled for productive capacity as to a variety of crops. Notwithstanding the fact that the State has 26,000,000 acres of land all told, there are only 5,000,000 in cultivation, which leaves 10,000,000 open for settlement. The government lands have virtually been absorbed, and therefore the natural home of the immigrants must be in the South; they should not, therefore, lose the opportunities that are open for them. One of the greatest openings is in truck gardening for delivery to the great cities of the North, East and West, for in this latitude crops of all varieties can be produced in the greatest abundance at least 90 days before the Northern crops.

"Original conditions were such that the present agricultural population was not educated along the lines of intensified farming to any great extent, because agriculture was conducted on the slave basis. There has been vast improvement within the last 30 years, but still it will require a generation to educate the Southern farmer on lines of economic diversity of crops to make him equal in efficiency to the agriculturist of other sections. The quickest way to obtain these results is the infusion of new blood and the bringing of the Northern farmer and trucker to the Sunny South. When he is once established in this section and adopts new methods, our population will naturally become educated by contact and example. Our agriculture department has done much to enlighten the farmer, but there is nothing, in our opinion, that will hasten his education in the new methods so much as practical demonstration and contact.

"In our observation we have been forcibly impressed with our advantages by these comparative conditions: In the middle West, which is a section noted for its fertility, land values range from \$65 to \$125 per acre. They produce, on an average basis, 18 bushels of wheat, which sells for an average price of \$12.40 per acre per annum. They produce 60 bushels of corn, which sells for \$18 per acre per annum, and timothy hay at 1½ tons per acre, which gives a gross return of \$15 per acre. Now, in the South, our fertile valley lands, which range in price from \$30 to \$50 per acre, produce a bale of cotton per acre, which will give a gross return of \$50 per acre per annum; five tons of alfalfa hay, which will give a gross return of \$50 per annum; 20 tons of sugar cane, which will give a gross return of \$60 per acre; in Irish potatoes, 150 bushels, which will give \$100 per acre; in cabbages, \$125 per acre. In fact, any crop that can be planted on these lands will give a gross return per annum of more than the original cost of the land. You will see, therefore, that there is something radically wrong, and this will

be corrected in a very few years by immigration.

"We have advised our Southern friends to acquire property and farms, especially in small bodies, because the immigration from natural sources will be so strong in a few years that these lands will all be absorbed. What is retarding immigration at present is the holdings of private individuals of large bodies of land, and this severely militates against a very rapid improvement. It is our opinion that agriculture on a large scale can no longer be conducted successfully with free labor, because control has been lost with the abolition of slavery, and the agriculturist is therefore at the mercy of an inefficient labor. The foremost thinkers of our times are cognizant of these facts and are shaping themselves for the disintegration which is rapidly coming. The dismemberment of these large plantations will make the South the greater portion of these United States, because it has been the history of the world that the people of the valleys are the main supporters of the population of any nation.

"We sincerely trust that your valuable journal will give publicity to our communication if they think our exposition of our conditions are correct."

ARGUMENTS FOR INDUSTRIES.

What Columbus, Miss., is Prepared to Offer to Investors.

Mr. F. M. Runnels, secretary of the Columbus, Miss., Progressive Union, writes as follows:

"Why should we not develop into a manufacturing city? Eighty miles to the east of here we have the Birmingham iron and coal fields. Sixty miles to the southeast are the Tuscaloosa coal mines. We pay \$1.75 for fuel or steam coal. We have within 30 miles of the city, north, east and south, on the banks of the Tombigbee river, unlimited tracts of oak, hickory, gum, poplar, cypress and cedar, which can be laid down in Columbus for small cost. Why cannot we have great wagon, furniture and veneer plants? There is not a machine shop in this section, outside one valued at \$20,000 in Columbus. Why cannot we manufacture boilers and engines? We have navigation to the ships in Mobile harbor six months in the year. We are giving sites free, exempting from taxation, guaranteeing against labor troubles, and so why should not Columbus prosper in an industrial way, as she has in a social, educational and agricultural way?"

Mr. Runnels says that "every city in the South with a spark of appreciation ought to throw every material assistance in its power to the Manufacturers' Record, as a small return for what it has done for this section."

Has Business in Many States.

[Special Cor. Manufacturers' Record.]

Savannah, Ga., March 2.

One of the most successful financial institutions in this city is the Savannah Trust Co. This company commenced business 18 months ago, and its deposits to January 1, 1904, showed an increase of \$146,178 in 12 months. A savings department was opened on November 1, 1903, and at the present time it has in the neighborhood of 3000 accounts. A feature of the savings bank department is a Saturday night branch, located on Broughton street (the principal shopping street of the city), where deposits are received from 7 to 10 P. M. Another feature, which has also grown, is an out-of-town savings department, or banking by mail, these accounts being scattered in Georgia, Alabama, Florida, South Caro-

lina and Virginia; they also have some accounts from Massachusetts. The checking accounts, on which interest is allowed, have grown steadily. Recently the company has been appointed trustee of a number of issues of bonds of railroads and other corporations, and also as registrar and trust agent of stocks. On January 1 the company paid its first semi-annual dividend of \$3 per share. The offices of this institution are very conveniently arranged for the transaction of business, and one department is maintained exclusively for women patrons, a feature being to pay the women always in new currency.

I. S. FIELD.

FACTORIES NEEDED.

Opportunities at La Follette and Jellico Suggested.

Mr. R. B. Baird, of Jellico, Tenn., writes to the Manufacturers' Record, regarding opportunities at Jellico and La Follette, as follows:

"During a period of five years, beginning with 1901, not less than \$5,000,000 will have been expended in railroads, manufacturing and mining equipments in Campbell county, and it now seems that Campbell county will soon have more miles of operated railroads than any other county in Eastern Tennessee. La Follette is in Powell's Valley, which has so long been known as one of the finest agricultural valleys in Eastern Tennessee. Jellico, the northern terminus of the Knoxville, La Follette & Jellico Railroad, is making wonderful progress in the way of building and manufacturing plants, and is known throughout the country as the place that produces the best domestic coal to be found anywhere. None of the modern boom methods have ever been indulged in by Campbell county promoters, but the growth in industrial and other commercial enterprises since 1895 has been both rapid and steady, and the county has never had a business failure of any importance.

"Jellico and La Follette both need factories and offer inducements in the way of cheap fuel, plenty of water, cheap labor and schools and churches, as well as cheap living expenses. There is not a flouring mill, cotton or woolen mill, or foundry or machine shop in the county, and we think parties interested in the establishment of such plants would do well to investigate us.

"Those desiring reliable information can get it by addressing the Jellico Commercial Club, Jellico, Tenn., or H. M. La Follette, La Follette, Tenn."

CONCRETE IN CROSS TIES.

Experiments Made in France with Substitutes for Wood.

Students of the railroad tie problem will be interested in a report made by Consul-General John K. Gowdy, of Paris, on recent experiments made in France with concrete, or with a combination of concrete and metal, as a substitute for wooden ties. On all the railways in the French colonies near the tropics, where the climate or insects rapidly destroy timber, the cross ties are generally of iron. Iron is used exclusively for that purpose in Cochin China, and in West Africa a very hard native wood is occasionally employed. Four or five years ago, according to Mr. Gowdy, M. Sarda, a cement manufacturer at Perpignan, in the south of France, proposed the use of concrete ties and sent a few samples to the Minister of the Colonies, but after a careful examination the engineers of the public works department reported that they were unsuitable, on

account of the cost, size and extra weight. They were also of opinion that concrete ties were best suited to lines where the traffic was heavy and frequent express trains ran, whereas on colonial railways the traffic is light and all the trains are slow. The ties, however, were satisfactory as far as strength, endurance and immunity from damage by climatic changes and attacks by insects were concerned, and might be employed if they could be manufactured on the spot in any of the French colonies.

Having failed to get his concrete ties adopted by the Minister of the Colonies, M. Sarda then applied to the State railway in France, and in March, 1900, sent four as a sample. They were not made entirely of concrete, but what the French call "ciment armé," iron and cement combined. The framework, or skeleton, consisted of five metal plates, placed vertically and held in position by stout iron wire or thin bars. The interstices were then filled in with cement. A thin layer of compressed felt, about one-fifth of an inch thick, was put between the tie and the bolt-heads.

These four ties were placed on the line near a small depot about 12 miles from Bordeaux, in October, 1900. A year or more later the track overseers reported that no fault could be found with them, but it was impossible to judge from such a small sample. The maker was therefore requested to make the number up to 100. These were duly received and laid down between April 20 and July 1, 1902. The manufacturer had made a slight change in the construction, so that the bolts could be replaced if necessary without damaging the tie.

The length of line on which concrete ties are at present used is less than 100 yards. The greatest weight concentrated on a single pair of driving wheels is about 14 tons. The rails are 11 meters (12 yards) long, and weigh 38 to 40 kilograms per meter, or from 77 to 81 pounds per yard; 14 ties are used for each rail of 12 yards. The ties are rectangular, with rounded corners and slightly thicker where the shoe irons are placed; the average thickness is about four inches. The weight of each tie is about 308 pounds, and the cost 14 to 15 francs (\$2.70 to \$2.90). The only means used to reduce shock is the thin layer of compressed felt already described.

It should be mentioned that superficial cracks were noticed in 30 of the 100 ties when they were laid down, but these cracks do not seem to have spread, for no complaints have been received from the track overseers. The experiment is too recent to enable any definite opinion to be formed, for the usual life of a timber tie in France is about 15 years, and therefore considerable time must elapse before comparison can be made as to whether cement is superior to timber in its power to resist shock, atmospheric changes, replacement of shoes and bolts, wear and tear, etc. At present it is impossible to say whether any economy would be effected in track labor or material, but in the opinion of the chief engineer of the State railway this is not probable unless the cost of the ties can be considerably reduced.

The price now charged is a serious obstacle to their employment, whatever their advantages may ultimately prove to be.

The Bank of Lake Village, capital \$15,000, has been chartered at Lake Village, Ark., by Walter Davies, E. S. Hilliard, Frank Strong G. E. Snell, Mrs. Katie K. Connerly, W. E. Henry, R. N. Henry, W. W. Easterly, H. E. Cook, W. G. Street and R. D. Duncan.

SOUTH'S VALUABLE ASSET.

Its Comparative Immunity from Strikes.

The South possesses one asset about which very little has been said, and which, up to the present time, has been very little appreciated, but as the years go by it will be more and more valuable, and largely upon it will be built the greatest development the world has ever seen—development now under way, and which will not reach its perfection until many years after the Panama Canal has become the gateway to the commerce of every country bordering on the Pacific Ocean.

We are just beginning to let the world know of our vast coal and iron deposits, from which hundreds of millions of dollars will be received to enrich our people; of the vast forests of hardwood, pine, cypress and other valuable timber, from which the South is receiving about half as much as it receives from her cotton crop; of the great oil deposits from which the Western world must get its light for many years to come; of the adaptability of the coast lands along the Gulf of Mexico for the production of the very best quality of rice upon which will soon be produced enough rice to feed many millions of people; of our inexhaustible phosphate deposits, not only the greatest in quantity, but the best in quality, now known; of the various precious minerals, the wonderful fertility of our soil, and the varieties of climate within comparatively short distances, and varying of altitudes of different locations, and the great variety of field and garden crops, fruits, etc., of all kinds which can be raised in the South.

Our cotton crop has advertised itself everywhere, because we raise about four-fifths of the world's crop, and the use of cotton cloth is becoming universal. But the one asset which we possess which is not possessed by any other part of this great nation is seldom thought of and still less mentioned. This is, perhaps, because the politicians, who do most of the talking, are afraid to speak openly of a condition which might hereafter be an obstacle in the path of men of small ideas, viz., the stability and contented condition of the laboring classes in our genial climate, and the consequent freedom from the great bugbear of other manufacturing sections—strikes and lockouts.

One is appalled at the great losses to property and of life which have been occasioned by strikes and lockouts in this and the old world. Hundreds of millions of money have been lost in wages, in struggles between capital and labor, and domestic and commercial conditions have been so upset, that for months and sometimes for years, large bodies of people have felt the pangs of hunger and were compelled to go half clad and endure all the hardships of desperate weather unsheltered, because of these struggles—not the part of the employés to get higher wages, and on the part of the employers to get labor as cheap as possible. Because of them, ships have lain rotting at the wharves, engines and empty cars have blocked side tracks for miles, riots, arson and murder have held high carnival; police and armies have been called out, while innocent children and the business world have suffered more terrors than any pen or tongue can ever fairly portray.

The manufacturer or common carrier who carries on business elsewhere in the United States always has this spectre at his feast, and knows not at what hour or for what cause he may be called upon to face a strike with all its terrors

and losses. He may be doing an excellent business and making good profits, and the future seem very bright for a continuance of existing conditions, when "presto, change," and a strike is upon him, and the profits and accumulations of years vanish because of some real or fancied wrong which results in a strike. What would not the manufacturers of the North, East and West give for a valid insurance against this great disturber of the peace and their property, knowing what they do of its baneful efforts? Would they not gladly raise millions of dollars to pay the premium demanded for such protection?

The South offers them this protection without charging a premium greater than the cost of bringing their capital to the South, whenever they wish to engage in any kind of manufacturing, be it in iron or steel making, in manufacturing any article made from wood or from the crops grown upon or materials dug out of the earth. It stands with wide open arms to welcome every industry, and every good citizen who comes to us with the intention of obeying our laws and supporting our institutions. Our genial climate effaces many of the terrors of the land of cold winters, where often the wages of working men cannot supply their families with the food and clothes necessary for their comfort.

Our productive soil makes living in the South very much cheaper; our less crowded condition gives the workingman a cottage, garden and shade, with fruits and flowers in his yard, in the place of two dark rooms on an upper floor of some dingy tenement house, where rents are high and ordinary conveniences are the lowest possible.

Our schools are free and unexcelled anywhere. In no other part of the world is the social standing of the self-respecting mechanic and laboring man as high as in the South. In no other part of the world will his children have fewer barriers to overcome or fewer obstacles thrown in his way in their efforts to better their social, financial or educational condition, a fact which should be advertised daily for years in our press, and until it becomes common knowledge everywhere, and which, when known, will induce more immigration of thoughtful working men than any other cause, and bring to the South the picked men from all other sections. In the heart of every thoughtful parent there is an earnest desire to see his children succeed in the world by gaining that higher success which comes only with a liberal education, and the perfection of the best that is in them; who want their children to have the respect and confidence of the best citizens of this republic, if their character deserves it, though their pecuniary assets may be small.

The Southern man is very tenacious of his personal rights. When the laws do not protect him he is perhaps too prone to defend them for himself. Perhaps this characteristic is in a measure responsible for our freedom from strikes and lockouts. Few Southern men would calmly sit still when they are being imposed upon or see their property destroyed without trying to prevent it, even at the cost of their lives. Few native Southern working men have been ground down by unfeeling employers. In no other part of the world is mutual confidence so firmly established.

In no quicker to the assistance of his employer than to the assistance of this employer if sickness or any other disaster render the bread-winner of the family disabled. The result is that our laboring people see that they are appreciated, that they

have no artificial obstacles to overcome, that the road to success and rapid advancement is open to them and their children. They know that the cost of living here is so much cheaper than in colder climates, that the wages they receive will provide much greater comforts for their families, and they are therefore willing to give a fair day's work for fair wages; and are not discontented, as they are liable to be where different conditions prevail. They know that, should misfortune overtake them, public sentiment in the South is such that his old-time employers would not dare to cast them off without assistance, even if they desired to do so.

If our daily press and trade journals will make this fact well known and keep it before the world until it is thoroughly understood, viz., that the South is free from strikes and lockouts and because of its methods, will continue so long as anything like present conditions prevail, they can convert this silent asset of the South into the most marvelous development this section has ever witnessed.

This asset is to the South what a high character for honesty and good intentions are to the individual man, and worth more to it than we can well estimate, and will hasten that development of our vast natural resources along just such lines as every intelligent lover of the South desires. I wish to emphasize this idea and to urge the press of Nashville and of the South to make the idea prominent now, when more than usual attention is attracted toward the South because of the very great advances in cotton and lumber—our two greatest money producers—and while manufacturers are disturbed about labor conditions in other parts of the country. There could be no more opportune time to emphasize this great advantage the South alone possesses, and to "strike while the iron is hot." The South fairly bristles with excellent opportunities for many kinds of manufacturing. Let us then, without delay, make them known to the world. In the words of the Tradesman, "While much has been accomplished, the struggle for ultimate supremacy still continues, and will until the South has acquired the position which nature has intended it must occupy. Its unlimited resources have as yet only been sampled, so to speak, and future development will disclose possibilities almost beyond comprehension. The magnitude of its buried treasures alone can only be surmised, each year's development but increasing the estimates of what their value is supposed to be. In one section or another of this South, nearly everything is grown, mined or manufactured that other sections produce or supply, and nowhere on either continent can be found a stretch of territory of equal size that is so rich in natural and development resources."—Lewis T. Baxter, in Nashville Daily News.

Against the Metric System.

A bill relating to the metric system was introduced in the last Congress, but its consideration was not pressed. Its friends in the present Congress are determined, however, that it shall now be considered. It is before the House Committee on Coinage, Weights and Measures, of which Mr. Southard, of Ohio, is chairman. The original bill reads as follows:

"That on and after the first day of January, 1904, all the departments of the Government of the United States, in the transaction of all business requiring the use of weights and measures, excepting in completing the survey of public lands,

shall employ and use only the weights and measures of the metric system; and on and after the first of January, 1907, the weights and measures of the metric system shall be the legal weights and measures of the United States."

In opposition to this measure the Bulletin of the American Iron and Steel Association, of Philadelphia, says:

"This is a very radical measure—one which, if it should become a law, would revolutionize all our business methods and work immense harm. We cannot believe that it has any chance of favorably consideration in either house, and yet it is obviously the part of wisdom to take no chances. The bill must be opposed with energy and at once. It should be beaten in the committee which is giving it consideration. Protests in writing can be sent to the chairman of the committee, Mr. Southard, or to any member of the committee, or to any Congressman."

Agricultural Machinery for Russia.

The so-called agricultural societies of Poland have recently determined to deal, as far as possible, only with the manufacturer. These societies are practically mutual associations of the landed proprietors for their own interests and for the advancement of agriculture in general. They are recognized by the government, and from the membership bear most excellent reputation as to credit, etc. The Warsaw society, acting for the societies in the governments of Plock, Kalisz, Radom, Piotrkow, Kielce, Lublin, Siedlce, Lomza and Suwalki, requests quotations f.o.b. vessel at New York on steam plowing outfits—that is, steam traction engines with gang plow attached. Intricate or complicated machines are not preferred, and weighty machines are not to be desired, on account of the duty. It is particularly to be desired that the manufacturer respond promptly to this inquiry, so that definite arrangements may be effected to have the machines on the spot in time for the early spring. Correspondence should be addressed to Mr. Ignacy Yorski, Okolnik No. 3, Warsaw, a director of the Warsaw Agricultural Society.

To prevent the smuggling of dynamite in the guise of cement, the Turkish Government has notified American manufacturers of cement that exporters of cement to Turkey must furnish a certificate of origin issued by the authorities at the place of manufacture, or the goods will be deported on arrival at Turkish ports.

Enterprising citizens of Scotland Neck, N. C., are agitating the question of the construction of a cottonseed oil mill at that point. It is argued that there is enough cotton raised in the neighborhood to supply seed for a number of mills.

An effort is being made to interest capitalists of the United States in a project for the construction, under private auspices, of an interoceanic canal across the Isthmus of Tehuantepec.

Business men of Savannah strongly favor a plan for the establishment of a direct line of steamers between that city and Cuban ports, to facilitate the trade in lumber, turpentine, rosin, dry goods, groceries and notions.

Mr. W. J. Furnival, of Stone Staff, England, has been led to investigate the kaolin deposits of South Carolina through an article recently published in the Columbian State, based upon data prepared by State Geologist Earle Sloan.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

TIDEWATER RAILWAY.

Plan to Build from West Virginia Coal Fields to Chesapeake Bay.

The incorporation and charter of the Tidewater Railway Co. is reported from Staunton, Va., the purpose being to build a line about 325 miles long from the mineral region in the southwestern part of that State and West Virginia to tidewater at the mouth of the James river. The headquarters of the company are at Staunton and the officers are as follows: Thomas D. Ranson, president; Mayor Wm. H. Landes, vice-president; Henry A. Walker, treasurer, and J. Baldwin Ranson, secretary. Other directors are Arista Hoge, L. W. H. Peyton and Charles M. East.

Messrs. Ranson & Ranson, attorneys, are quoted as giving the following information concerning the project: Parties in the North and East, principally of large means and having business interests already in the two Virginias, have become satisfied that the time is ripe for the construction of a trans-Alleghany railway, traversing a tier of southern Virginia counties from the West Virginia coal fields to a seaport at the mouth of the James, upon a route offering much easier and broad uniform grades than either of the existing systems and with connections favorable to a heavy tonnage. A liberal charter was granted by the Corporation Commission indicating a route which would traverse the counties of Giles, Montgomery, Roanoke, Franklin, Bedford, Campbell, Pittsylvania, Halifax, Charlotte, Prince Edward, Lunenburg, Nottoway, Brunswick, Dinwiddie, Greenesville, Sussex, Southampton, Isle of Wight, Nansemond and Norfolk. This however may be varied.

Surveying parties are already in the field in Giles, Montgomery and Roanoke counties. Mr. P. D. Elmore is said to be chief engineer, with headquarters at the Terry Building, Roanoke, Va.

RECEIVER FOR A. & N. C.

Capt. V. E. McBee, Who Sought to Lense the Line, Is Appointed.

Advices from Raleigh, N. C., report that Captain V. E. McBee has been appointed temporary receiver of the Atlantic & North Carolina Railroad on petition of K. S. Finch, of New York, a stockholder in the company. The appointment was made by Judge Thomas R. Purnell, of the United States Circuit Court, while sitting at Norfolk, Va., and a hearing will be had on April 4 to decide whether the receivership shall continue.

The Atlantic & North Carolina Railroad, which runs from Goldsboro to Morehead City, N. C., 95 miles, is controlled through a majority of stock by the State of North Carolina, and Capt. McBee recently made an offer to Governor Charles B. Aycock, on behalf of himself and associates, to lease the line without result. The president of the road is James A. Bryan, of Newbern, N. C.

It was reported that Capt. McBee represented the Vanderbilt interests, but this was denied. Among those said to be associated with him is W. J. Edwards, president and general manager of the Atlantic & Western Railroad at Sanford, N. C., and also receiver of the Carolina Northern Railroad. The At-

lantic & Western is a new line just now being constructed. Only a few miles have been built, but 50 miles are under construction. If continued eastward it could connect with the Atlantic & North Carolina.

BIG GOULD EXTENSION.

Reported Plan to Build a Texas and Colorado Through Line.

Dispatches from Dallas, Tex., quote Mr. George Gould as saying that the Weatherford & Mineral Wells branch of the Texas & Pacific Railway will be extended to Colorado to connect with the Denver & Rio Grande Railway at Trinidad, thus making a Gould line through from the West via Fort Worth to the Gulf, connection being made at Fort Worth with the International & Great Northern Railroad of the Gould System. Mr. Gould is further reported as saying that this work will not be undertaken for some months, also that a double-track line will be made between Dallas, Fort Worth and Weatherford.

The construction of such an extension as this would involve the building of about 500 miles of track northwest from Mineral Wells, probably up the Brazos River Valley and thence across the Llano Estacada and the northeastern corner of New Mexico into Colorado. It would practically parallel the Fort Worth & Denver City Railway but at some distance to the southwest.

Kansas City & Lexington.

Mr. Stephen A. Mitchell, chief engineer of the Kansas City & Lexington Electric Railway Co., 101 New York Life Building, Kansas City, Mo., writes the Manufacturers' Record:

"The line is proposed to connect this city and Lexington, a distance of 44 miles, the road to furnish both passenger and freight service for the territory covered. The location survey has just been completed and the quantities and estimates are now being worked up. It is expected that the matter will be in shape to receive bids for construction not later than April 1. The purpose of the company is to equip and construct a first-class electric road, as the country traversed is a fine agricultural district and thickly settled. The line will furnish, not only to some half a dozen small towns but to Lexington, a place of 6500 people, first-class transportation to Kansas City, where now they have a very indifferent service and but one train a day. Under these conditions there is no question but that it will be a paying proposition."

J. C. McGrew, of Lexington, is president of the road.

To Connect Four Towns.

Mr. Lucian E. Schilling writes from Magnolia, Miss., to the Manufacturers' Record as follows: "We are having a survey made for an electric railroad through Magnolia, Fernwood, McComb City and Summit, Miss., some 12 miles. As soon as preliminary work can be completed construction will begin. The success of the enterprise is assured. We will have a combined population of about 15,000 people."

Pennsylvania's Annual Report.

The annual report of the Pennsylvania Railroad Co. shows gross earnings of \$122,626,419, an increase of \$9,963,089 as compared with 1902. The expenses were \$84,773,056, an increase of \$9,721,985; net earnings \$37,853,363, increase \$241,104. The gross income of the company was \$41,214,861 and the net income after payment of fixed rentals, interest on bonded debt, etc.,

was \$27,506,507. Out of this was paid on account of sinking and trust funds and principal of car trust \$3,240,848, and for extraordinary expenditures for revision of grade and alignment, abolition of grade crossings and other improvements \$9,472,727. The balance, \$14,702,931, was distributed in a 6 per cent. dividend. The amount of credit of profit and loss December 31 was \$24,742,224.

Pensions for Railroad Men.

The Atlantic Coast Line Railroad Co. has established a pension department at its headquarters in Wilmington, N. C. Under this plan all officers and employés who have attained the age of 70 years will be retired, and those of them who have been 10 years in the company's service, will be granted pensions. But engineers, firemen, conductors, brakemen, yardmasters, switchmen, bridge foremen, section foremen and supervisors may, at the age of 65 years, retire and receive pensions, also provided that they have been employed by the company for 10 years.

The value of such a system as this is great. Although probably most employés save something regularly out of their earnings, any funds thus accumulated are not likely to be so large as to make the additional sum received from a pension anything else than gratifying. Besides, according to the telegraphic report of the adoption of the pension system, the basis on which pensions are to be established is liberal, and an appropriation of \$50,000 will be made each year by the company to meet its requirements. The system also has the advantage of establishing an age limit for both officers and employés, thus insuring to the company the services of men who have not outlived their years of usefulness.

The members of the pension board are: Dr. G. G. Thomas, superintendent and chief surgeon of the relief department; H. C. Prince, comptroller; R. E. Smith, assistant to the general manager; J. S. Chambers, superintendent of motive power, and E. B. Pleasants, chief engineer, all of whom have their headquarters at Wilmington.

Meridian Light and Railway Co.

Mr. William H. Armbrecht, vice-president of the Meridian Light and Railway Co. of Meridian, Miss., writes from Mobile, Ala., to the Manufacturers' Record as follows:

"The Meridian Light and Railway Co. will issue \$750,000 of bonds and increase its authorized capital stock to \$1,000,000. These enlargements in capital are for the purpose of providing means for continued improvements of the property. The improvements are being made under the direction of Ford, Bacon & Davis, engineers of New York.

"The company has recently placed an order with the General Electric Co. for a 500 K. W. D. C. generator direct connected to a Curtis turbine, and one 300 K. W. rotary converter. The company has also placed an order with the American Car Co., of St. Louis, for five Brill full convertible cars. The new brick power house building is completed."

Greenwood to Memphis.

Mr. Sam R. Weems, vice-president and general manager of the Weems-Lockwood Furniture Co., and who is also secretary and treasurer of the Greenwood, Miss., Board of Trade, writes the Manufacturers' Record that Mr. A. B. Andrews, first vice-president of the Southern Railway, has advised the board that he expects to make a personal tour of the proposed extension (from Webb, Miss., to Memphis, Tenn.) of the Itta

Bena Branch of the Southern Railway, which now operates between Greenwood and Webb, his purpose being to estimate the cost of the extension.

Mr. Weems also says this line traverses a very rich section of the State, and will add materially to the growth of Greenwood and all the towns along the route to Memphis. It will give Greenwood two direct lines to that city besides the route via Grenada, Miss. The Greenwood Board of Trade first took up this matter with the Southern Railway, and will undertake to secure the necessary right of way and aid in many other ways to have the extension made at an early date.

Electric Railway.

Mr. Gustav Haerle, president of the Lexington Water Co., Lexington, Mo., writes the Manufacturers' Record as follows:

"I am interested in a plan to build a bridge across the Missouri river at Lexington and an electric railway from R. & L. Junction to a point on the Chicago & Alton, no definite point agreed upon. The electric line is to connect with the following railroads, viz., Chicago & Alton, Lexington branch of the Missouri Pacific, river route of the Missouri Pacific, Wabash, Santa Fé, and St. Joseph line, branch of Santa Fé. The territory to be traversed is from R. & L. Junction to points on the Chicago & Alton, north and south of Lexington. I have made a proposition to the people relative to the construction of a bridge and electric railway across the river at this place."

Mr. Haerle further says that he is conferring with several gentlemen in regard to the enterprise, but no decision has yet been reached as to when construction will begin.

Norfolk & Southern's Progress.

The Norfolk & Southern Railroad has ordered three locomotives to be delivered in April.

This will make five new engines ordered within the last two months, and will increase the number of the company's engines to 20 on the North Carolina & Virginia Division. The road has made considerable improvements and progress in the last few years.

It has built new warehouses and wharves at Berkley, and has erected new bridges along its line. Not the least of its improvements was the construction of a connection from Providence via Kempville to Norfolk, which avoids the use of the Norfolk & Western's tracks, over which trains formerly entered the city.

Freight Terminal Disagreement.

It is reported from Atlanta, Ga., that negotiations conducted by the Louisville & Nashville Railroad and other lines with the city authorities, looking to an agreement upon plans for building the proposed new freight terminal, have ended without results, there being a disagreement upon the question of how much of the expense should be borne by the railroad and by the city with reference to the necessary street changes.

President Milton H. Smith, of the Louisville & Nashville, is quoted as saying that it is his opinion that the railroad companies and the city authorities are so far apart in their views that it will be impossible for them to agree, although some of his associates think differently.

Construction Contract Let.

The Luxora, Evening Shade & Northwestern Railroad Co., of Luxora, Ark., lately incorporated, is reported to have awarded to H. P. Liston a contract for grading the first 10 miles of its line, the

work to begin immediately. Surveys are being made for the further construction of the road, and it is stated that other grading contracts will be let as soon as the engineers can make their reports. Mr. M. W. Connolly, secretary and treasurer of the company, has been authorized to make contracts for steel rails and other track material, as well as for locomotives and cars. It is further stated that contracts for ties and bridge timbers have been let.

Gulf & Ship Island Railroad.

Messrs. Fisk & Robinson, 35 Cedar street, New York, report that the Gulf & Ship Island Railroad, in the seven months ended January 31, 1904, received from connections 10,680 loaded cars, as against 8322 in the corresponding months of the previous year. In the same period of 1903-4 it delivered to the connecting railroads and to the Gulfport pier 22,178 loaded cars, as compared with 20,282 cars in the same time the year before. The deliveries at the pier increased in the seven months from 904 to 3505.

In January 22 vessels cleared from Gulfport with 21,744,000 feet of lumber, as against 18 vessels, carrying 17,262,000 feet, in December. In the seven months ended January 31, 88 vessels sailed from Gulfport with cargoes of lumber aggregating 87,873,000 feet.

In the seven months ended January 31, the company transported from all stations 44,198 bales of cotton, as against 39,821 in the corresponding period last year, the increase of 4377 bales being 11 per cent.

The company's freight earnings in the last six months of 1903 amounted to \$728,361, as against \$658,946 in the latter half of 1902. Passenger earnings amounted to \$190,332, as compared with \$164,596 in the same time the previous year. Gross earnings per mile of road averaged \$4770 in the latter half of 1903, as against \$3362 in the latter half of 1902.

Possible Extension in Texas.

Mr. E. B. Cushing, assistant to the president, Gulf, Western Texas & Pacific Railway (Southern Pacific system), writes from Houston, Texas, to the Manufacturers' Record concerning the report that the Port Lavaca Branch would be extended. He says:

"Last year we made a survey from a point on our Port Lavaca Branch to Hynes Bay, in Refugio county. This line was about 25 miles long, and intended to develop the rice land in the western part of Calhoun and the eastern part of Refugio county. The construction, however, was found to be expensive, owing to a crossing of six or seven miles of land overflowed from the Guadalupe river, and the project was laid aside. I cannot say whether it will be built or not."

Railroad Notes.

According to a report from Beaumont, Texas, the proposed Bowie, Lafourche & Northwestern Railroad, in which R. H. and J. R. Downman, of New Orleans, are prominently interested, will be built in connection with the Houston, Beaumont & Northern, in which the Kirby Lumber Co. is concerned.

A dispatch from Morehead, Ky., says that the Morehead & West Liberty Railroad, which will probably soon be completed, will open up inexhaustible beds of fine cannel coal, besides thousands of acres of virgin timber land. E. B. Carr is general manager.

The Texas Southwestern Railroad is reported to have purchased 50 logging cars from the Marshall Car Wheel and Foundry Co., at Marshall, Texas.

LUMBER.**ACTIVITY IN LUMBER.****Increase in Southern Industries Dependent Upon It.**

In different parts of the South at present there is a greater activity than ever before in lumber operations and in the establishment of industries dependent thereon. In spite of impediments due to stress of weather in some quarters, the month of February has shown no diminution in the developmental work of this character. There has been, for instance, reported a number of important purchases of timber tracts, especially in West Virginia. One of these is credited to Hon. Henry G. Davis and associates, who have obtained control of what is known as the Blackwater Manor property, of 36,000 acres in pine, hemlock and soft wood, stretching in Tucker, Pendleton and Randolph counties in almost unbroken sweep from Thomas to Hendricks for 11 miles. Into this territory a railroad has been partly built, but timber operations have not been begun. At Wildell near Elkins plans are being made for the working of 12,000 more acres by other interests, and the Curtin Lumber Co. has purchased a timber rights on 30,000 acres of land in Webster county and will erect saw mills, while the coal deposits underlying the tract have become the property of Mr. Elkins. In Alabama, Western capitalists have purchased the Yellow Pine Lumber Co.'s properties, together with 50,000 acres of timber land, and will develop an extensive lumber manufacturing enterprise. Stockholders of the Fuller Lumber Mills, of Selma, and others, have purchased 10,000 acres of timber land between Selma and Blocton, and the Keystone Coal Co. has been organized by Pennsylvanians for the development of 1200 acres of timber near Birmingham. Several thousand acres of turpentine timber near Orange Springs have passed into the hands, it is said, of an interest which operates one of the largest turpentine farms and naval stores plants in Florida, controlling a territory about 20 miles long and 12 miles wide. The turpentine industry is also responsible for the purchase by a Minneapolis man of 700 acres of land near Hastings, and by B. W. Blount, of Ocala, of 56,840 acres, near Punta Gorda. The Aycock Brothers, of Moultrie, Ga., will cut and saw the timber on 25,000 acres bought by them near Chipley, Fla. Other purchases include 3000 acres, which will cut about 10,000,000 feet of pine timber in Izard county, Ark., by Tennessee parties, 3400 acres by a firm at Unadilla, Ga., 15,000 acres by an Iowa man in Pickens and Oconee counties, South Carolina, 1200 acres near Summit, Tenn., by a Meridian, Miss., lumber company, 900 acres in Spotsylvania county, Virginia, by John Fenderson, of Oswego, N. Y., and the purchase by Georgians for \$200,000 for a Cincinnati man's interest in the property of the Ensign Oscamp Lumber Co., including 20,000 acres of land.

Companies to manufacture or deal in lumber have been organized at Baltimore, Md.; Washington, D. C.; Roland, Fayetteville, Cotter, Pinnacle and Booneville, Ark.; Birmingham, Ala.; Maxton, Winston-Salem, New Bern, Cerrogordo, Bayboro and Burlington, N. C.; Union, S. C.; Meridian, Willing, Miss.; Nashville, Tenn.; Taylor and Trawick, Tex., and Norfolk and Saltville, Va.

Plans for different industries reported during the month are saw mills at Howes, Ga.; Gainesville, Fla.; Lecompte, La.; Rutherfordton, N. C.; Gleason,

New Plants at Nashville.

During the last few weeks a number of new industries connected with the lumber trade have been started at Nashville, Tenn. The Union Lumber Co. is building a sash and door factory, to be ready for operation in a couple of months. The Standard Lumber and Box Co., which is now operating a planing mill and box factory, will add a saw mill during the summer. The Southern Lumber and Box Co. is building a planing mill and box factory in connection with a band mill. Machinery is being installed for a large circular saw mill by Youngman & Nease. The Central Lumber Co. and the Jacob & Dewes Co., new firms, are operating saw mills. George C. Brown & Co. will handle in West Nashville hard woods and red cedar, largely from their mills at McMinnville, and R. N. Chestnut will handle in the same locality yellow pine.

A Market for Tupelo.

Mr. T. K. Edwards, who has for 31 years been lumber agent of the Illinois Central Railroad, is doing his utmost to bring about a more general utilization of tupelo wood, which he estimates will bring from \$24 to \$26 a thousand feet, delivered in Chicago. The tupelo tree, indigenous to the overflow section of Mississippi and to lands bordering on the Gulf, has been recently tested, according to Mr. Edwards, by the harvesting machine companies of Chicago, to such effect that orders have been placed for more of the wood, to be used in making threshing machine rollers. The wood makes a splendid flooring, and takes a better finish than mahogany, as it is very hard and has no grain. Mr. Edwards believes that as cypress and other high-priced woods disappear, tupelo will come to the front.

China Oil Tree.

Five years ago the attention of American importers was called to the value, as an astringent and drier in varnish for the finer kinds of furniture, of the product of the Chinese wood oil tree. Since then two American firms have established branches at Hankow, China, for the exportation of the oil, and one of them has shipped nearly 200,000 gallons since last fall. Because of the fact that no barrels are manufactured in the province where the oil tree grows, a Hankow firm has imported from New York shooks for 5000 barrels and machinery for setting them up. About a thousand seeds of the oil tree have been planted in California and are doing well.

Reforesting Waste Lands.

The New Hampshire experiment station has in press a bulletin which outlines the different kinds of waste lands that are to be found in the State, and shows how these lands should be handled in order to bring them into a profitable forest crop. Prof. F. William Rane, the author, divides for convenience the waste lands into six kinds, as follows:

- (1) Run out agricultural fields and abandoned farms.
- (2) Natural pastures (so called) usually stony and unadapted for cultivation; junipers, hardhack, sweet fern and brush kept down by the treading of animals and by cutting and burning occasionally.
- (3) Burned over wood lots and forests.
- (4) Sprout or brush lands.
- (5) Depleted sandy lands (barrens).
- (6) Low or wet lands.

Under each of these heads the writer discusses means and methods of han-

dling them so as to assist nature in getting them into forest growth. The principal means mentioned are in transplanting seedlings, and sowing or planting seeds where nature has not the opportunity of doing it, and filling in and assisting her wherever possible, for quicker returns. Nature's methods are slow, but with a little helping and ingenuity on the part of man, results can be had much earlier than we realize.

These waste lands are of value when they are in forests. Many and most of them were at some time or other heavily timbered. Much of the land under the above headings by proper husbanding can be brought back to forest growth, and then if scientific methods of modern forestry are exercised they can be continued as forests indefinitely.

This bulletin will interest others than citizens of New Hampshire. A number of the older Southern States have their waste lands, and they may find hints in the bulletin which may be applied with modifications to suit the different climate.

Lumber Notes.

Virginia and North Carolina lumber manufacturers, dealers and shippers find that in spite of the interference with this class of freight by the ice blockades, the demand remains firm and the prices higher than they have been before. Norfolk and vicinity is expected to consume large quantities of building material during the coming year, and there are indications that the call from the North for Virginia and Carolina material will be louder than has been heard in many years.

Mr. W. B. Stilwell, of Savannah, who has recently visited Baltimore, reports that he does not believe that the fire there will affect the lumber trade to the extent that was expected by some when it occurred. As building will be comparatively slow, no heavy demands on the outside will be made; he thinks, though, they will be sufficient to help to keep up prices.

During February 10,652,377 feet of yellow pine were shipped from Jacksonville to the coastwise trade and 1,875,494 feet of lumber to foreign ports, some of it going to Cuba and to the British West Indies, but the greater part going to the French West Indies.

All the great lumber concerns at Georgetown, S. C., including a cypress mill, which was shut down for six weeks for repairs, are now running on full time, and are shipping consignments of rough and dressed lumber, shingles and laths to Northern markets.

The capital stock of the J. M. Card Lumber Co., of Chattanooga, Tenn., principally engaged in exporting hardwood lumber to Europe, has been increased from \$20,000 to \$50,000, as a means of using the surplus in the treasury.

It is estimated that there are now awaiting shipment at different points on the Tennessee river, in Lauderdale county, Ala., 600,000 cross ties for the purchasing railroads. These cross ties represent about \$180,000.

About 3100 acres of timber land has been purchased in Williamson county, Tennessee, it is understood, as a source of supply for the Louisville & Nashville Railroad.

The adoption of the new rule for the inspection of long-leaf yellow pine is looked for at a meeting in Jacksonville on March 15, of the Georgia Interstate Sawmill Association.

The Santee River Log & Cypress Co., of South Carolina, report that good logs are now bringing \$8.50 per 1000, and may rise to \$9 before the season is over.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

Etoowah Mills Plans.

In January the Manufacturers' Record referred to the enterprise known as the Etoowah Mills, which W. I. Young, of Greensboro, N. C., and associates had previously arranged to build. The company has now received from the engineer in charge, J. E. Sirrine, of Greenville, S. C., plans and specifications for its 15,000-spindle and 450-loom plant. The main building will contain the carding and spinning machinery. It will be two stories high, 150 by 250 feet. Picker house will be 40 by 60 feet, and the weave mill will be two stories high, 125 by 200 feet. First floor of latter will contain 250 looms for lower-grade products, second floor 200 looms, 25-harness dobbies. The weaving building will have saw tooth roof. There will also be warehouses, boiler and engine rooms. The first installation of power will consist of a 600 horse-power unit, alternating generator direct connected with electric drive through the mills, induction type motors. As announced previously, the Etoowah Mills is capitalized at \$500,000, which will be approximately the amount of the initial investment.

Three 20,000-Spindle Mills.

The Manufacturers' Record of February 25 referred to a proposition accepted by the business men of Mabank, Texas, for the establishment of a large cotton factory. It is now prepared to state that plans are maturing which will result in the erection of that mill and of two others in Texas, each to have an equipment of 20,000 spindles. W. I. Young, of Greensboro, N. C., and associates have submitted the three propositions, one to Mabank, one to Paris, and one to a town not named. They expect that their plans will materialize in the near future and three separate companies will be organized, Mr. Young to be president of each. Six, eight and 10-ounce cotton duck is the product proposed. (Mr. Young and his associates are now building a 15,000-spindle and 450-loom plant at Greensboro, N. C.)

Carolina Textile Conditions.

The report of a committee of business men of Fayetteville, Ark., considering the feasibility of establishing a cotton mill at that place, of their visit of inspection of the textile industries in South Carolina, presents a pleasing picture of the conditions there. They found that the majority of the mills, beginning with plants worth from \$50,000 to \$100,000, had doubled, trebled and quadrupled in capacity from their surplus earnings, and that seven mills have plants worth at least \$1,000,000 each. They mentioned especially Pelzer, with its population of 6000, under the mill company's government solely, and, following a reference to its free public school and free library, said:

"In all the mill communities the presidents spend money liberally to provide comforts and protection for the operatives. As a result of this broad-gauged, beneficent policy, the most amicable relations exist between capital and labor. Labor organizations are unknown. As

a class, the operatives are happy and contented, and many of them are laying up modest bank accounts.

"We satisfied ourselves thoroughly that the mills of Carolina are prosperous. They are making good cloth and good dividends. From various stockholders we learned that every well-managed mill is laying up a solid surplus, in addition to declaring 8 to 10 per cent. annual dividends.

"From brokers we learned that very few stocks are selling below par.

"From a mill president we learned that he made last year \$46,000 clear on a mill capitalized at \$200,000.

"Everywhere we saw new mills in process of erection and old mills doubling their capacities. Capital would not go into such investments if the business had not been found profitable. South Carolina now stands next to Massachusetts as a cotton-manufacturing State, and if the present rate of increase continues it will in a few years lead the Union.

"Last spring a disastrous flood destroyed some large mills on the Pacolet river. Buildings and machinery were wrecked and ruined. The day after the flood the mill stock of the destroyed mills was selling for 125."

The Lily Mill Located.

In its issue of November 26 the Manufacturers' Record presented details regarding the water-power and mill enterprise of the Lily Mill and Power Co., of Shelby, N. C. At that time the site for the mill had not been chosen, but it has just been chosen and contracts for the plant have been awarded. About 500 horse-power will be developed at once and transmitted by electricity to drive the mill, with its equipment of 5000 spindles, for manufacturing combed Egyptian and sea island yarns. The mill building will be one story high, 80 by 352 feet in size. George E. Ladshaw, of Spartanburg, S. C., is the hydraulic engineer in charge, and the Lowell Machine Shops, of Lowell, Mass., is the mill engineer. Building the plant will be under the direct supervision of John Hill, of Atlanta, Ga., Southern representative of the Lowell company. Contract for all the textile machinery has been awarded, and contracts for water-wheels and electrical drive will be signed at an early date.

A 5000-Spindle Mill.

A cotton factory to have an equipment of 5000 spindles, for manufacturing yarns, will be established at Selma, N. C. The projectors are now soliciting subscriptions to the proposed capital of \$100,000, and hope to complete arrangements soon for making the necessary building and machinery contracts. M. C. Winston, a Selma banker, is the principal in the enterprise. He will be prepared to receive estimates on the exact cost of the equipment and other requirements.

Cotton in Cuba.

Caimeto, Cuba, February 20.
Editor Manufacturers' Record.

I see the cotton question better handled in the Manufacturers' Record by its contributors than it is in any of the agricultural papers of America. As the cotton question is at the front now, and especially so here in Cuba, I will contribute a few observations from "The Gem of the Antilles" on King Cotton.

To begin with, I am a cotton man from Central Texas, "raised in the cotton patch and gin house," an ex-thousand-acre cotton farmer, so know a few things

about cotton, cotton, cotton. To quote Col. S. S. Harvey, another extensive ex-cotton man, now here: "I never again want to live among the miserably poor people who have to raise cotton at less than 10 cents per pound."

So that howl of the manufacturer about robber prices now for cotton had just as well be kept quiet at least until the farmer has time to buy clothing enough to be at least decent in appearance, as other laborers; for cotton at 15 cents per pound does not mean even a dollar and a half a day, and where in America can you find it any cheaper than that?

To pick up a Cuban paper any one would think that the day of cane and tobacco was over, and that it was cotton, cotton, King Cotton here as well as in the South. The facts are facts that have been and are being learned here very fast. Cotton is not king here, but cane is. Cotton ventures so far have been the saddest failures imaginable, thousands being thrown away by Northern wiseacres, who were sure of getting rich quick here by adopting the negro and the cotton business, and of course got a Northern negro who knew just what he saw about cotton on the train coming down. Northern cotton-farm bosses, as Southern darkies like Southern men, don't take to cotton in Cuba and won't very fast, so long as cane is always paying from \$50 to \$150 per acre and tobacco and pineapples more even than that. The fact of the business is this, there is no labor here for cotton and is not going to be. Besides the bad grasses, such as the Johnson and others worse, prevent its culture even with plentiful labor.

Cotton when bringing 50 cents per pound, in the time of negro slaves, was abandoned down here, and at 15 is a losing game for the Cuban producer. The cotton business here has been boomed by promoters selling seed at \$200 per ton that cost laid down here less than \$25 per ton.

W. W. SOMERFORD.

The Cotton Movement.

In his report for February 26 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 179 days of the present season was 8,636,011 bales, a decrease under the same period last year of 126,213 bales; exports were 4,893,213 bales, a decrease of 159,304 bales; takings by Northern spinners 1,682,071 bales, an increase of 58,334; by Southern spinners 1,221,218 bales, an increase of 24,582 bales.

Textile Notes.

In January reference was made to the Victor Manufacturing Co. of Greer, S.C., as possibly to enlarge its mill this year. The company is now giving notice to its stockholders of a meeting that will be held on March 25 to consider increasing capital stock by \$350,000. It is proposed to issue this stock as \$150,000 common and \$200,000 first preferred non-convertible. The company's present equipment includes 27,000 spindles and 700 looms.

The H. Schumacher Knitting Mills, of Navasota, Texas, referred to last week as contemplating the manufacture of the cotton yarns it will need, has been formed by Messrs. John W. Schumacher and W. B. Wessen. They have ordered an equipment of machinery for manufacturing hosiery, and will install same at once. No final decision has been reached as to manufacturing the yarns,

An experienced knit goods manufacturer of the East contemplates building a branch mill in the South, and has been investigating the advantages of Dalton, Ga., as a location for such an industry. No definite announcements have been made as yet regarding the enterprise.

R. H. Hanna, proprietor of the Anchor Woolen Mills, Maryville, Tenn., has leased buildings formerly occupied by another woolen plant. He will remove his equipment of machinery to the new structure, and possibly make additions and improvements.

The Gibson Mfg. Co., of Concord, N. C., held last week the meeting recently noted as called to consider an increase of capital. This increase is from \$350,000 to \$500,000, and probably arrangements will be made for enlarging the company's mills.

The Alden Mills of New Orleans, La., will enlarge its knitting department. Plans and specifications for the erection of an additional building have been completed by Favrot & Livaudais. No further details announced.

R. T. Fewell's cotton-waste mill at Charlotte, N. C., was destroyed by fire last week; loss was \$12,000. He intends to rebuild, and will make immediate arrangements for new buildings and machinery.

There is no truth in the rumor referred to last week that the Delaware Cotton Co., of Wilmington, Del., will build a \$100,000 cotton mill at Anderson, S. C. The company manufactures fine dress goods, ginghams, madras, etc.

H. D. Egerton, of Ingleside, N. C., contemplates establishing a woolen mill. He is ready to correspond with manufacturers of woolen machinery relative to the purchase of complete equipment.

The Elizabeth City (N. C.) Hosiery Co. has amended its charter, permitting an increase of capital from \$10,000 to \$50,000.

Phosphates and Fertilizers.

A dispatch from Louisville, Ky., says that there is a shortage of cars in the grain movement, because of the demand for cars by the great fertilizer markets, stimulated by heavy buying in the Southeastern States. From North Carolina to Georgia unusually heavy sales of commercial fertilizers are reported and prices are higher than they have been for some time. The farmers, though, do not seem to object particularly to the advance in price, and are buying not only for an increased acreage, but for an increased amount of fertilizer to the acre.

Much interest is attached to the South Carolina commission which is to investigate the condition of the phosphate deposits of the State and to report to the next session of the Legislature. The work of the commission is preliminary to the development of the plan for the establishment of fertilizer works at the State Penitentiary, the product to be sold to the farmers at cost.

The British steamer Capac brought to Wilmington, N. C., last week a cargo of Peruvian guano. In recent weeks such cargoes, the first in several years, have arrived at Baltimore, which was a pioneer in that trade seventy-odd years ago, and at Charleston.

An optional contract for 225 acres of phosphate land near Pulaski, Tenn., has been signed by Mr. S. S. Lord with George S. White, of Wales. If the land is bought the price will be \$85 an acre.

A scarcity of labor in the phosphate regions of Polk county, Florida, is reported, and a search for hands is being made in Jacksonville and at other points.

MCEHANICAL.

New Fire-Proofing Material.

The disastrous fire in Baltimore several weeks ago has been the means of creating much discussion regarding the effects of that great conflagration on the

much like ordinary corrugated iron. First the upper side and then the lower side are coated with a mixture of one part Portland cement to two parts of sand, making the total thickness $1\frac{1}{4}$ " or a little over, depending upon the span between the purlins. On top of the con-

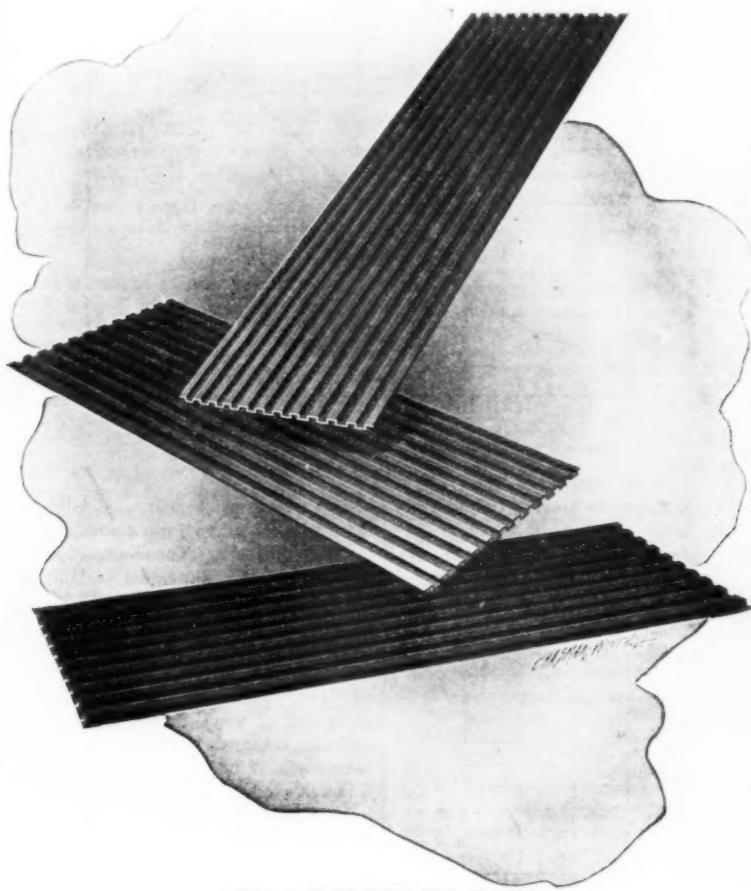


FIG. 1—FERROINCLAVE SHEETS.

various fire-proof materials and forms of construction that have come into use during the past decade. In view of this the accompanying illustrations of "Ferroinclave" will be of interest to manufacturers, contractors, architects and others. Ferroinclave is manufactured by the

crete are then placed two coats of B. H. non-drying water-proofing compound. The Brown Co. states that "this makes a roof which is light, cheap, fire-proof and able to withstand the action of steam and sulphurous gases.

"The advantages which this roof con-

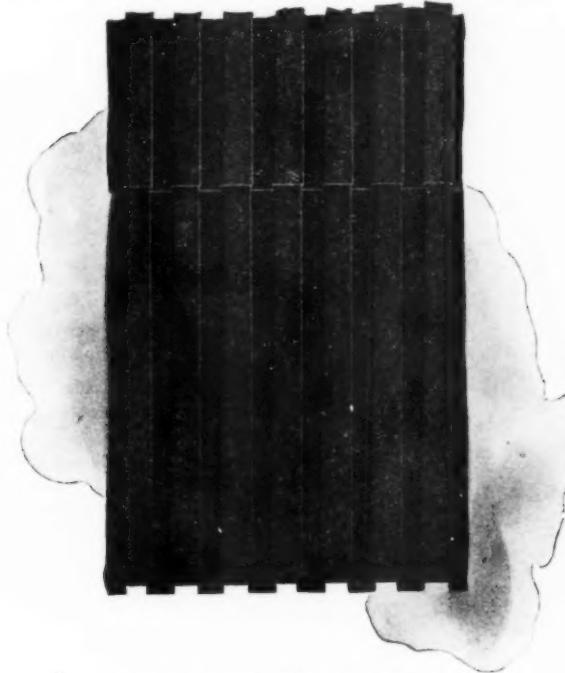


FIG. 2—FERROINCLAVE SHEETS.

Brown Hoisting Machinery Co., of Cleveland, Ohio. It consists of corrugated steel sheets which have dovetail-shaped corrugations. See Fig. 1.

When used in the construction of fire-proof roofing it is laid upon the purlins

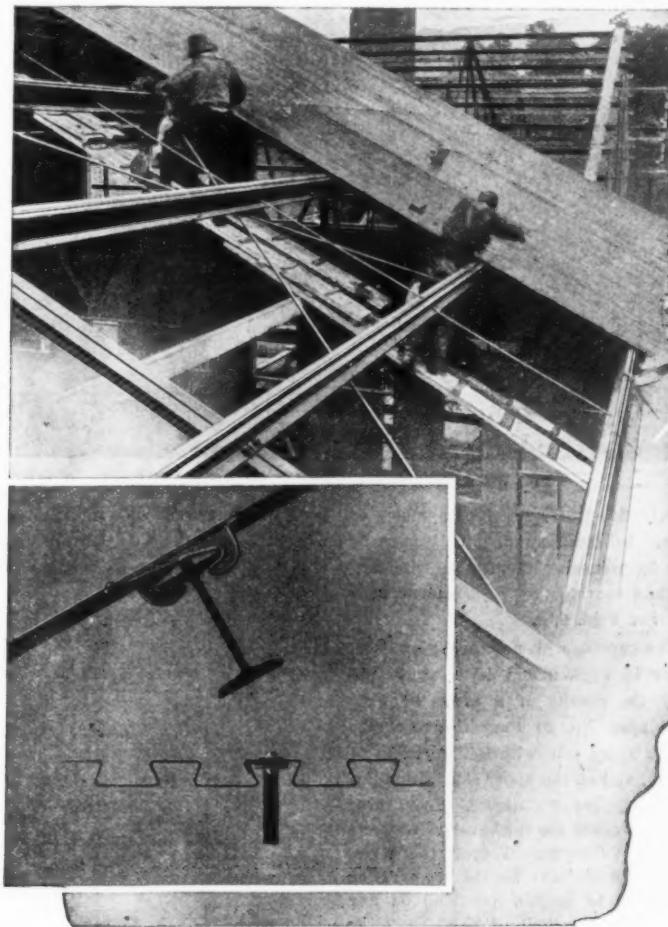
struction has over wooden roofs covered with slate or composition are obvious. Also as a fire risk, besides being much safer than a wooden roof with sprinklers underneath, it is much cheaper.

"In the construction of other reinforced

concrete roofs, a wooden roof or centering must be constructed to support the concrete until it has set sufficiently to sustain its own weight. About ten days after the concrete has been laid the centering must be taken down. Then the under side of the concrete should be

be used, and if the roof is not very irregular, the building may be made habitable at any time during the winter by laying the Ferroinclave, which will form in effect a corrugated iron roof until the concrete may be put on in the spring.

"This could not be done were it not for



FIGS. 3, 4 and 5—FERROINCLAVE.

given a thin coat of cement mortar to cover up the marks of the boards. The use of Ferroinclave saves the entire expense of this centering, because it is stiff and strong enough of itself to support the concrete and the workmen who are putting it in place.

"Also, because of this stiffness of Ferroinclave, the great amount of metal, and its advantageous location in the concrete, a Ferroinclave reinforced concrete roof, for the same strength, may be made only one-half or one-third as thick as other reinforced concrete roofs. Therefore the weight is less in about the same proportion. This effects a saving in the cost of the purlins, trusses and columns which support it.

"If a building which is to be covered

the fact that the corrugations at one end of the sheet are wider than at the other (see Fig. 2), and the sides are so shaped that the side lap is water-tight.

"Figs. 3, 4, 5 and 6 show the styles of fastening clips and how they grip the purlins. The $\frac{3}{8}$ " by $\frac{3}{8}$ " hard wood or wrought iron strip shown on top of the purlin in Fig. 4 is always used to support the Ferroinclave high enough above the purlin to permit of concrete being pushed in between. Thus the Ferroinclave itself does not touch the purlin.

"Fig. 7 shows two men engaged in concreting the upper side of the Ferroinclave. In setting, the concrete may crack in a few places, due to the deflection of the purlins, the settling of the foundations, jarring caused by the work-



FIG. 6—FERROINCLAVE CLIPS.

with any other reinforced concrete roof approaches completion during the winter, it is necessary to wait for warm weather before the concrete can be laid and the building made weather-tight and habitable. If a Ferroinclave roof is to

men, the contraction of the cement, etc. Such few cracks are grouted with neat Portland cement before the water-proofing compound is put on.

"The under side of the finished roof is given a coat of white cold water paint.

"Floors may be constructed in much the same manner as roofs, except that in order to make them strong enough to support ordinary floor loads the thickness of concrete upon the upper side of the Ferroinclave must be increased, making the total thickness of floor usually from $2\frac{1}{2}$ " to 4". To make the floors ab-

bly higher. Upon cooling with a stream of water the roof was found practically intact, except for a softening of the lower surface and the development of a few fine cracks in each surface, none penetrating more than half-way through. The condition of the roof was such that it was still, at the close of the test, a

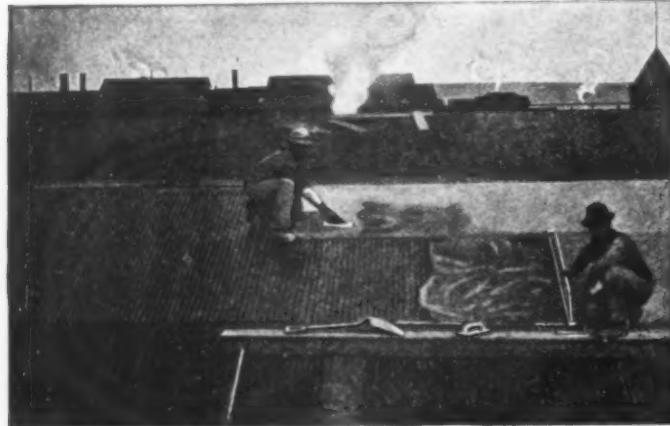


FIG. 7—CEMENTING A FERROINCLAVE ROOF.

solutely fire-proof, the beams must, of course, be fire-proofed. This may be done by wrapping them with wire netting and coating this with cement mortar. See Figs. 6, 8.

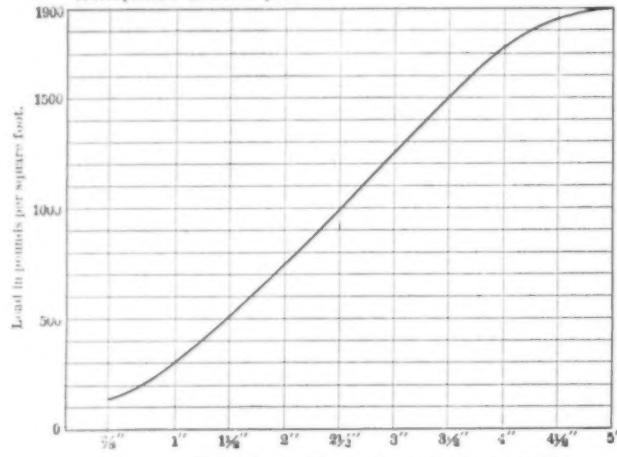
"The curves, with accompanying data, shown in Figs. 9 and 10, show graphically the results of a series of tests made upon No. 24 Ferroinclave coated on the under side with $\frac{3}{8}$ " thickness of plaster, and on the upper side with varying thicknesses of concrete. From these may be figured the thickness of concrete required to be placed upon the upper side of Ferroinclave for the construction of a floor to sustain any load on any span up to the limit of 9' 9" center to center of floor beams."

Prof. Charles L. Norton, who is in charge of the Insurance Engineering Experiment Station, says, regarding a fire test which he made upon Ferroinclave roofing coated to a total thickness of $1\frac{1}{4}$ " :

"Under the action of fire against the lower side, the roofing became gradually heated through, until at the end of an hour bits of wood were charred upon being placed in contact with the top of the roof. The temperature of the fire was from 1700 degrees F. to 1900 degrees F. A few cracks developed on both sides of the slab in less than ten minutes, but none of them penetrated

good fire stop, and with a little cement plastering it would have been in appearance and efficiency in its original condition."

Curve of uniformly distributed loads per square foot, producing $\frac{1}{4}$ inch deflection on a 4 foot $10\frac{1}{2}$ inch span of No. 24 "Ferroinclave," painted; then coated with cement, mortar and plaster. Time of setting 11 days. Width of test pieces 20 inches. 2-pieces.



Thicknesses of cement above "Ferroinclave," 2 sand to 1 Vulcanite cement. $\frac{3}{8}$ -in. wall plaster (gypsum) below "Ferroinclave."

FIG. 9—FERROINCLAVE TESTS.

The heat conductivity and hence to a certain extent the liability to condensation of such a roof $1\frac{1}{4}$ " thick, is about one-twentieth that of an ordinary corrugated iron roof. Where a Ferroinclave

24 U. S. G. 20" wide by 10' long. As sheets are always so laid that they will lap 3" at the ends, this makes the maximum spacing of purlins 9' 9" and the usual spacing 4' 10 $\frac{1}{2}$ ".

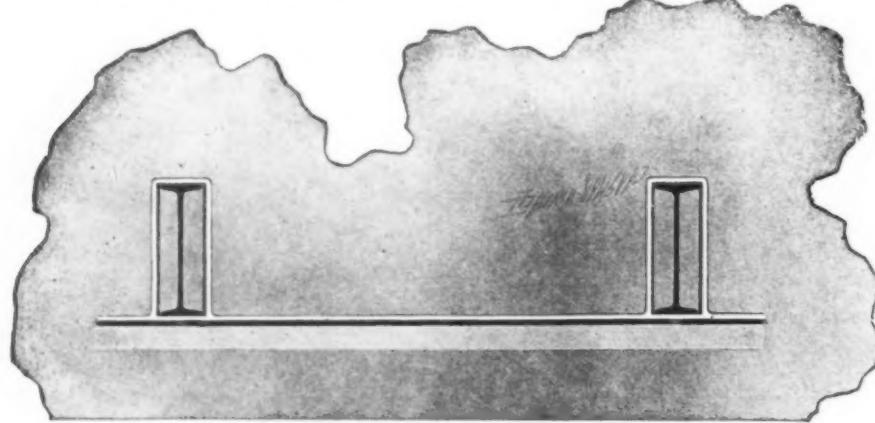


FIG. 8—FERROINCLAVE FLOOR SECTION.

further than to the steel sheet, and no fire came through the slab during the four hours test.

"At the end of two hours the temperature of the top of the roof had risen to the igniting point of wood, but at the end of four hours it had not risen sensi-

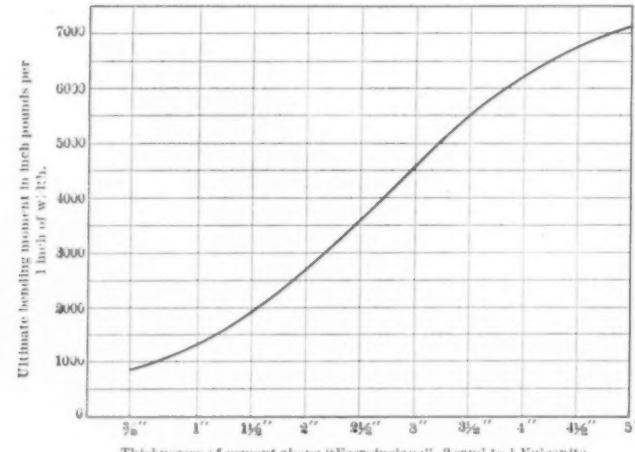
tively higher. Upon cooling with a stream of water the roof was found practically intact, except for a softening of the lower surface and the development of a few fine cracks in each surface, none penetrating more than half-way through. The condition of the roof was such that it was still, at the close of the test, a

The Brown Hoisting Machinery Co. will assist prospective customers in the design of such portions of proposed buildings as may be influenced by the use of Ferroinclave. The Ferroinclave catalogue, just published, shows many uses to which Ferroinclave may be put.

SOLID FRAME VARIETY WOOD WORKER.

A machine capable of working wood in many ways is indispensable to all those having such diversified work to do. It

Ultimate bending moments per 1 inch of width of No. 24 "Ferroinclave," painted; then coated with cement, mortar and plaster. 2 spans, each 1 foot $10\frac{1}{2}$ inches. Tests made upon sheets 20 inches wide. Time of setting 11 days.



Thicknesses of cement above "Ferroinclave," 2 sand to 1 Vulcanite cement. $\frac{3}{8}$ -in. wall plaster (gypsum) below "Ferroinclave."

FIG. 10—FERROINCLAVE TESTS.

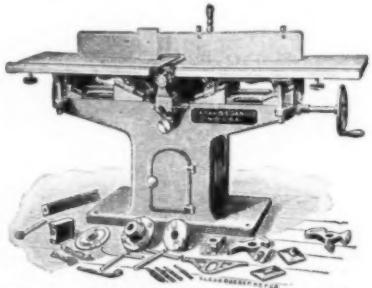
roof is sufficient to prevent trouble from condensation.

Standard Ferroinclave sheets are No.

should prove of benefit especially to those who cannot well use separate tools for their purposes. The improved wood worker herewith illustrated is built to meet that demand, and has the requisite qualities for doing the work that will be readily appreciated. Attention is invited to these. It is stated that the machine will work 12 inches wide. It will plane out of wind, surface straight or tapering, rabbet door frames, rabbet and face inside blinds; joint, bevel, gain, chamfer, plow, make glue joints, square-up, raise square, bevel or ogee panels, bore, bead, rip, cross-cut, tenon, rout, groove, work circular moldings, and other such work, to advantage.

Vibration and wear on all parts are lessened by many new and ingenious devices; while the different adjustments, change of knives, etc., can be accomplished easily, quickly and accurately. The aim has been to make the machine as labor-saving as possible.

A boring attachment is mounted at back of column, having a table and stops to regulate cuts. A fence is also pro-



SOLID FRAME VARIETY WOOD WORKER.

vided for angle boring, and a table is placed on top of the boring table for rotary mortising.

The tables are planed true, each has independent vertical and longitudinal adjustments, and are easily raised and lowered. The adjustable fence and bevel rest requires no separate adjustment, as it raises and lowers with the tables.

The makers of this improved tool, J. A. Fay & Egan Co., of 270 to 290 West Front street, Cincinnati, Ohio, will be pleased to send further particulars on application.

The stove works at Sheffield, Ala., has received an order for \$27,000 worth of stoves, to be delivered as rapidly as possible to a South Carolina wholesale house.

CONSTRUCTION DEPARTMENT.

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The Manufacturers' Record seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

ALABAMA.

Andalusia—Electric-light Plant, Ice Factory and Water Works.—Frank Sutter has secured franchise for water works, electric plant and ice factory, and will begin construction at once.

Bessemer—Viaduct.—Birmingham Rail-way, Light & Power Co., Birmingham, Ala., is arranging to construct proposed steel viaduct over tracks.

Bessemer—Plumbing.—Reese Plumbing Co. has been organized by Mrs. N. A. Reese and E. L. Gerber.

Bessemer—Lumber Company.—J. I. M. E. W. T. C. C. and A. S. Crotwell have incorporated the Crotwell Lumber Co., with capital of \$10,000.

Birmingham—Oil Wells.—Virgil J. Long, of Beaumont, Texas, contemplates organizing company to develop oil properties.

Birmingham—Foundry.—American Casting Co., erecting foundry at East Birmingham, will increase capital from \$20,000 to \$50,000.

Clanton—Electric Light and Power Plant.—Installation of electric-light and power plant is being considered. Address Jos. P. Van Derveer.*

Dogwood—Coal Mine.—M. Drennen, Mayor of Birmingham, Ala., has purchased the Randall-Cary coal mine at Dogwood, and will organize stock company to reopen same.

East Lake—Electric-light Plant.—City will vote March 28 on issue of \$13,500 of bonds for erection of electric-light plant, recently mentioned. Address R. N. McKinley, Mayor.

Easley—Plow Factory.—Empire Plow Co. contemplates making improvements, including installation of machinery for making plow handles.

Gadsden—Mercantile.—Gadsden Grocery & Feed Co. has been incorporated, with a capital of \$15,000, by R. A. Harris and others.

Huntsville—Bank-fixture Factory.—Plummer & Nichols have established plant for

manufacture of bank fixtures in connection with the Plummer Plaing Mills.

Montgomery—Cotton Compress.—F. B. Fliske and James P. Ferrall have purchased entire property of the Mutual Compress Co.

Montgomery—Cottonseed Oil Mill and Grist Mill.—E. Lamar, L. Lamar, C. W. Hooper and H. M. Smith, of Selma, Ala., operating oil mills at Selma and other cities, will remove one of the Selma plants to Montgomery and enlarge by addition of new factory. Cost of improvements \$125,000.

Ozark—Sewerage System.—City will construct sewerage system as recently reported. Marvin McDonald engineer in charge.*

Thomas—Cooperage.—Kennedy Stave & Cooperage Co. has made additions to and enlarged its factory.

Uniontown—Sewerage System.—City contemplates constructing system of sewerage. Address L. A. Morgan, Mayor.

ARKANSAS.

Clarksville—Coal Mines.—Eureka Anthracite Coal Co. has been organized under Delaware laws. Capital stock is \$300,000, and officers include John C. Hill, president; A. M. McKennon, vice-president, and C. L. Pyle, secretary. Company will develop 580 acres of coal land in Johnson county, and will open negotiations with contractors to erect a modern breaker building, including installation of complete machinery for breaking and screening coal into large bins. Address, for further particulars, C. L. Pyle, secretary and general manager.*

Eureka Springs—Sanitarium Company.—Chartered: Magnetic Springs Sanitarium, with capital of \$10,000, and C. A. Reed, president; E. A. Dabbs, vice-president, and C. H. Bartlett, secretary-treasurer.

Forrest City—Plantation.—St. Francis River Plantation Co. has been incorporated, with capital of \$25,000, by R. G. Hobbs, M. E. Hobart, A. L. Plowman and others.

Hot Springs—Pharmacy.—Chartered: Southern Pharmacy Co., with capital of \$6000, by L. J. Hunt, C. W. Lehman, J. E. Sears and others.

Little Rock—Hardware.—Foster Hardware Co. has been incorporated, with capital of \$100,000, by W. C. Foster, Frank B. Gregg, A. E. Moran and others.

Little Rock—Publishing.—Chartered: Altus-Dunning Publishing Co., by H. L. Hembee (president), J. D. Crockett, W. J. Pendegast and others.

Monticello—Cotton Oil Mill.—Drew Oil Mill has increased capital from \$31,000 to \$62,000.

Ogden—Gas and Oil Company.—Hudson River Oil & Gas Co. has been incorporated, with a capital stock of \$500,000, by J. D. Budd, of Ogden; J. W. Willis, Washington, Ohio; G. W. Lamb, Texarkana, Ark., and others.

Osceola—Mercantile.—G. R. Brickey Mercantile Co. has been incorporated, with capital of \$10,000, by G. R. Brickey, J. L. Dean, Leon Sullivan and others.

Pine Bluff—Sewerage.—Robinson Bros. have contract at \$3800 for constructing sewers in District No. 5.

Rogers—Mercantile.—H. L. Stroud Mercantile Co. has been incorporated, with capital of \$25,000, by H. L. Stroud (president) and others.

Yardell—Mining.—Flynn Mining Co., with capital of \$2000, has been incorporated by J. H. Basham, A. S. McKennon, A. J. Flynn and others.

FLORIDA.

Athens—Chair and Table Factory.—C. J. O'Farrell, 119 East Georgia avenue, Atlanta, contemplates establishing chair and table factory.*

Augusta—Turpentine Plant.—Vice-President Mott, of the Ellis-Young Co., of Savannah, Ga., and D. J. Furlow, of the Millhaven Mills, Savannah, Ga., are arranging for organization of \$20,000 company to develop turpentine properties.

Gainesville—Cooperage.—Holmes Cooperage Co., which forms a part of the Union Cooperage Co., Portsmouth, Va., will erect plant at Gainesville with capacity of 60,000 spirit barrels a year.

Hillman—Bottling Works.—Aragon

Springs Co., John B. Clotworthy, president, will establish soda water manufactory.

Lake City—Starch Factory.—Gulf States Refining Co., reported recently to build plant for manufacture of starch from the cassava root, expending between \$100,000 and \$200,000, will have main building about 200x160 feet with power plant and other buildings separate; capacity will be 30 tons of finished product per day. H. E. Stockbridge is engineer in charge.*

Montezuma—Harness Factory.—W. E. Vance will erect two-story brick building, 30x60 feet, for enlarging harness factory, as lately reported.*

Ocala—Lumber Mills.—Stickney Lumber Co. has incorporated, with capital of \$30,000, for developing timber lands. A. P. Stickney, J. M. Tilley and J. D. Robertson, incorporators.

Quiltman—Fire Alarm System.—City will install fire alarm system. Address The Mayor.

Tampa—Mercantile.—F. H. Davis and others have incorporated the F. H. Davis & Co., with a capital of \$10,000, for conducting general grocery business.

Tampa—Cigar Factory.—Landfield Bros. & Co., manufacturers of cigars, New York, will establish branch factory.

Tampa—Railroad Terminals, etc.—Seaboard Air Line has purchased the Island lying at mouth of Hillsborough river and will use it for a portion of the extensive terminals which the company purposes to build. Plans have been prepared and contemplate expenditure of not less than \$500,000 in construction of wharves, warehouses, extra trackage and other facilities. J. M. Barr, general manager, Portsmouth, Va.

GEORGIA.

Arlington—Lumber Mill.—Arlington Lumber Co. is about ready to put its mills in operation; capacity will be 30,000 feet of lumber a day.

Athens—Chemical Works.—Empire State Chemical Co. has incorporated, with capital of \$150,000, to operate chemical works recently built. E. R. Hodgson, Sr., A. H. Hodgson, J. M. Hodgson and Harry Hodgson, incorporators.

Atlanta—Real Estate.—Southern Real Estate Improvement Co. has been incorporated, with capital of \$10,000 and privilege of increasing to \$1,000,000, by W. P. Andrews, H. L. Cobb and others.

Canton—Telephone System.—Canton Telephone Co., reported recently as incorporated, with capital of \$25,000, will enlarge system. J. W. Jarvis, manager.*

Columbus—Fertilizer Factory.—Federal Chemical Co., of Louisville, Ky., is reported to establish fertilizer factory.

Columbus—Real Estate.—J. L. Treadaway Real Estate & Investment Co. has been incorporated, with capital of \$20,000 and privilege of increasing to \$100,000. B. A. Bass, president; S. T. Whittaker, secretary-treasurer.

Dahlonega—Gold Mine.—McAfee-Linn Gold Mine is installing additional machinery for increasing output of its mine.

Dublin—Telephone System.—A. and N. M. Block have leased building, which they will enlarge and improve as telephone exchange for their proposed telephone system.

Elberton—Water Works.—City has voted issue of \$40,000 of bonds for construction of water works previously mentioned. Address The Mayor.

Forsyth—Churn Factory.—G. O. Persons and E. J. Spratling have established churn factory, to be operated as Rocker Churn Manufacturing Co.

Hoschton—Flour Mill.—J. W. Maddox & Bro. will erect flour mill as lately reported; to be of 25 barrels capacity and operated by water-power.*

Maxeys—Ginnery and Cottonseed Oil Mill.—James M. Smith, A. J. Gillen and others will incorporate company to purchase Maxey Mfg. Co.'s cotton ginnery and build cottonseed oil mill in connection, as recently reported; capacity of cottonseed oil mill will be 40 tons per day, and \$25,000 will be invested in the improvements.*

Milledgeville—Lumber Company.—Cook Lumber Co. has been incorporated with capital of \$25,000, for conducting general

lumber business by Thomas F. Cook, Geo. E. Smith, J. W. McMillan and others.

Rockmart—Stove Foundry.—Rockmart Stove & Foundry Co. has been organized for establishing \$12,000 stove foundry. James Long is president; L. Kimball, of Atlanta, Ga., vice-president, and H. A. Powers, of Rome, Ga., secretary-treasurer.

KENTUCKY.

Henderson—Publication.—E. A. Jonas has purchased interest in the Henderson Journal, and improvements will be made, including installation of linotype machinery, etc.

Barbourville—Coal Mine.—Matt and Jack Asher, of Pineville, Ky., are opening up coal mine.

Elizabethtown—Planing Mill.—W. H. Gardner, Neff Jenkins and Wesley Daugherty will establish planing mill.

Lexington—Flour Mill.—J. E. Miles Milling Co., J. E. Miles, of Frankfort, president, will erect \$10,000 flour mill in Lexington.

Lexington—Ice and Coal Company.—Consumers' Ice & Coal Co. has been incorporated with capital of \$50,000, by I. W. Mantel, T. B. Satterwhite, L. G. Strode and others.

Lexington—Coal Elevator.—Cassidy Coal Co. will construct coal elevator which will handle approximately 30,000 tons of coal next year.

Louisville—Publishing.—Louisville News Bulletin Co. has been incorporated by J. M. Walker, Clarence L. Martin and C. C. Osley.

Louisville—Fire-extinguisher Factory.—Charles E. Sapp, J. C. Freeman, N. C. Cureton and others have incorporated Eclipse Manufacturing Co., with capital of \$2500, for manufacture of fire extinguishers.

Morganfield—Coal Mines.—Rock Springs Coal & Mining Co. has purchased and will develop 1000 acres of coal land.

Paducah—Wagon Factory.—Paducah Wagon Works Co. has been incorporated, with capital of \$20,000, by Ed. Hansen, Tobe Steger and A. B. Williams for manufacture of wagons.

Winchester—Water Works Enlargement.—Winchester Water Works Co. will extend and improve its system of water works.

LOUISIANA.

Abbott—Oil Pipe Line and Tank.—Crowley Oil & Mineral Co., of Crowley, La., will expend \$25,000 in improvements, which will include construction of oil pipe line eight miles long and erection of oil tank with capacity of 37,500 barrels of oil at Abbott.

Alexandria—Canal.—Red River Atchafaya & Bayou Beaufort Board has awarded contract to R. N. Andrews & Co., of Hamilton, Ohio, at \$55,000, for extension of canal a distance of 14 miles.

Baton Rouge—Electric-light Plant.—C. H. Kretz is interested in the installation of electric-light plant, as recently reported, and will invest about \$10,000.*

Cheneyville—Lumber Company.—Southern Lumber Co. has been incorporated with capital of \$50,000, by J. B. Crawford, W. H. Ford and C. L. Crawford.

Clinton—Lumber Company.—F. T. Harris Lumber Co. has been incorporated with capital of \$15,000, and F. T. Harris, president; J. F. Harris, vice-president; D. J. Saunders, secretary, and D. W. Pipes, treasurer.

Frierson—Culture Company.—Louisiana Orchid & Culture Co., Limited, has been incorporated, with capital of \$100,000, by William Gross, of Mansfield, La.; H. B. Hartman, A. W. Mann and J. A. Mann, of Kansas City, Mo.

Indian Bayou—Cotton Gin.—J. K. Morgan and J. B. Ledoux are interested in erection of \$10,000 cotton gin.

Jacksonville—Lumber Mills.—Stein, Tyrasch & Co., of San Antonio, Texas, have purchased the milling plant of G. E. Brady at Jacksonville, and will reorganize under name of Brady-Stein Lumber Co., with Kurt C. Stein, president; C. A. Goeth, vice-president, and J. E. Brady, superintendent.

Mansfield—Brick and Tile Works.—De-Soto Brick Co., Limited, has been incorporated, with capital of \$5000, to make pressed brick and tiling. J. J. Snell and T. A. Snell, of Dothan, Ala.; William

Goss and B. Y. Wemple, of Mansfield, incorporators.

Monroe—Hardwood Mill.—A. A. Gunby has purchased the Charleston plantation of 2200 acres of land, and will erect mill for utilization of the hardwood on the property.

Napoleonville—Acetylene Gas Plant.—Police Jury has decided to install acetylene gas-lighting system in court-house and jail.

New Orleans—Printing and Stationery Plant.—Frank Dameron and J. Ogden Piereson have organized as the Dameron-Piereson Co., and will establish plant at 317 Camp street for printing purposes, manufacture of blank books, stationery, etc.

New Orleans—Stone and Tile Company.—George Q. Whitney, I. L. Lyons, R. M. Walmsley, Charles Carroll, C. M. Soria and others have incorporated the Catahoula Stone & Tile Co., with capital stock of \$750,000, for developing stone quarries and other mineral properties, manufacturing tile, etc.

New Orleans—Oil Refinery.—A. N. Kirchbaum, representing a syndicate of factory operators of Chicago, has, it is reported, made arrangements for establishing in New Orleans of a \$175,000 commercial oil-refining plant.

New Orleans—Knitting Mill.—Alden Knitting Mills will enlarge plant. Plans for erection of additional building have been drawn by Favrot & Livaudais.

New Roads—Ice Factory.—L. R. Howell contemplates erecting ice factory.

Rayne—Rice Mill.—Ida Rice Mill contemplates incorporating as a stock company with capital of \$50,000, in which event it will build one two-story building 96x180 feet, one two-story building 30x60 feet, and a four-story structure 30x60 feet, all covered with corrugated iron and composition roofing. J. C. Corbett, Crowley, La., will be the architect. Company will also install new and additional machinery.*

Shreveport—Electric-light and Gas Plant.—F. R. Hodges has applied for franchise for installation of electric-light and gas plant.

Welsh—Machine Works.—Armstrong Machinery & Well Works Co. has been incorporated with capital of \$25,000, to manufacture and repair machinery, etc., by J. P. Nicholas, William Murray, John W. Armstrong and others.

West Carroll Parish—Timber Lands.—Pioneer Cooperage Co., of St. Louis, Mo., has purchased 53,000 acres of timber land in West Carroll Parish.

MARYLAND.

Baltimore—Wood-filler Factory.—Kroeger Bros., manufacturers of wood-fillers, and recently burned out, have re-established plant at 880 McKim street.

Baltimore—Wood Mill.—J. E. Piles will erect wood mill for William G. Michael; will be two stories, of brick, iron and wood, 20x50 feet.

Baltimore—Woodworking Factory.—C. P. Amendt, operating woodworking factory, and burned out in recent fire, will re-establish plant at 924 Greenmount avenue.

Baltimore—Brush Factory.—Rennous, Kleinde & Co. will re-establish their brush factory destroyed by the recent fire. No details as to new buildings have been decided. Most of the machinery was of special manufacture and only a small quantity of equipment will be open to competitive bids.*

Baltimore—Box Factory.—Henry D. Dreyer has let contract to Henry Piereson, at about \$5000, for erection of brick building to cost \$5000, to be equipped with machinery for manufacturing wooden boxes. Steam heat will be installed.

Baltimore—Optical Works.—G. T. Sadler & Son, temporary offices at 326 North Charles street, have engaged Henry Brauns, of 113 West Saratoga street, as architect, and J. Henry Miller, Dover street near Hanover, as contractor for erection of store building and optical works at 14 and 16 East Baltimore street, in the burned district. Structure to be four, five or six stories high, 30x113 feet, of stone and brick, to be equipped with elevators, electric lights and steam heat. Approximate cost, \$30,000 for building. No machinery will be needed for the present.

Baltimore—Brush Factory.—Rennous, Kleinde & Co., brush factory destroyed by the recent fire, will re-establish their plant and have purchased abandoned brewery, Frederick near Carroll Roads, to be remodeled for their uses. Price paid for building was \$20,000. Most of the machinery used by the firm is of special construction and will not be open to com-

petitive estimates. Some minor equipment will be wanted.*

Baltimore—Glass Works.—Pittsburg Plate Glass Co., of Pittsburg, Pa., states that the report that it intends to build manufacturing plant in Baltimore, referred to last week, is not correct. But the company will secure or build a large warehouse to carry a large stock of its products to meet the urgent demands of the building trades, because of the recent fire. R. T. Conley and Charles H. Harris, representing the company, are registered at The Belvidere, and have temporary offices in Builders' Exchange, Charles and Lexington streets.

Baltimore—Electric Company.—Towson Electric Co. has been incorporated, with capital of \$5000 and privilege of increasing to \$100,000, for purpose of generating electricity. Incorporators are Michael J. Fitzsimmons and Edward L. Ward, of Baltimore City; William A. Slade, James Rittenhouse, John F. Everhart, of Baltimore county, and others.

Baltimore—Metal and Iron Company.—Chesapeake Metal & Iron Co. has been incorporated, with capital of \$8000, for dealing in all kinds of metals and minerals and their compounds. Thomas P. Blake, Moses Reichman, Charles A. King, Thos. J. Reilly and Frank H. Widner, Jr., are the incorporators.

Baltimore, Md.—Chocolate Factory.—Headley Chocolate Co. has secured temporary quarters at 716 West Baltimore street, and installed machinery for manufacturing chocolate, 150 operators to be employed at once and 275 in the near future. The company will also build on new site a factory building, four stories high, of brick, to cost \$35,000.

Baltimore—Chemical Manufacturing.—McCormick & Co., temporary offices Pleasant street, near North street, have let contract to J. Henry Miller, Dover and Hanover streets, for erection of seven-story brick and stone building, to be equipped with machinery for manufacturing chemicals. This plant will replace plant formerly at Concord and Lombard streets, in the fire district.

Baltimore—Pottery Works.—Samuel Ales, Eastern avenue and Eden street, will erect new factory building for his pottery. New structure to be four stories high, 40x215 feet, to cost \$22,000, and the contractor for erection is T. B. Stansfield, 109 Clay street.

Baltimore—Barrel Factory.—Kimball-Tyler Co., Central avenue and Bank street, will erect new and modern building for its barrel manufacturing plant. Building to be two stories high, 120x150 feet, of brick, to cost \$20,000. Contract for erection has been awarded to T. B. Stansfield, 109 Clay street.

Baltimore—Snuff Factory.—R. Starr & Co., snuff manufacturers, will erect four-story brick building, 18x81 feet, in the fire district, to replace structure recently burned. Machinery for manufacturing snuff will be installed. Offices at 436 N. Calvert street.

Baltimore—Contracting.—Charles A. Hook, Jr., Contracting Co. has been incorporated, with capital of \$15,000, by Chas. A. Hook, Jr., Chas. E. Ford, Jr., Richard F. Hook and others.

Baltimore—Printing.—Chartered: Thomas & Evans Printing Co., with capital of \$20,000, by Chas. H. Evans, Willard F. Thomas and others.

Baltimore—Bottle-seal Works.—Crown Cork & Seal Co., Guilford avenue and Oliver street, has accepted plans by Jackman C. Gott, 210 N. Charles street, for erection of proposed office and factory building, five stories high, of brick, iron and steel, with granite and brown stone trimmings and fireproofing materials. Contract will be awarded March 7.

Frederick—Turnpike Company.—Maryland State Turnpike Co. has been organized with Douglas H. Hargett, president; Chas. S. Snook, Lewisville, vice-president, and O. C. Wareheim, secretary-treasurer. Eighteen turnpike companies are represented, which have a combined capital of \$1,500,000.

Hagerstown—Electric Plant.—The J. G. Schaff Electric Co. has contract for installation of complete electric light and power plant for new four-story building of the Hagerstown Bookbinding & Printing Co.

Walkersville—Flour Mill.—Glade Valley Milling Co., reported last week to erect 100-barrel flour mill, has been incorporated with capital of \$3500, by William Ray, E. O. Ray, W. H. Buchanan, R. M. Wright and others.

MISSISSIPPI.

Bay St. Louis—Electric-light Plant and Ice Factory.—J. H. Miller, of Biloxi, Miss., has purchased and will operate the Bay St. Louis ice and electric-light plant.

Brookhaven—Construction Company.—Louis Montville Construction Co. has been incorporated with capital of \$15,000, by Louis Montville, C. L. Montville and others.

Chatawa—Quarrying.—Chatawa Gravel Co. has been incorporated, with capital of \$100,000, to mine gravel, stone, sand, etc. W. C. Fritter, president; H. M. Thompson, vice-president; C. Julian Bartlett, secretary.

Crystal Springs—Cotton Oil Mill, Ice Plant, etc.—Crystal Springs Cotton Oil, Fertilizer & Mfg. Co., reported recently as incorporated with capital of \$75,000 to manufacture cottonseed oil, will install a 30-ton plant; will also put in plant for mixing fertilizers and erect small ice factory. Neither an engineer nor architect has as yet been engaged. Address all communications to W. H. Barron, vice-president.

Eupora—Telephone System.—A. W. Carter, of Grenada, Miss., contemplates establishing telephone system at Eupora.

Greenwood—Cooperage.—Chartered: Delta Cooperage Co., with capital of \$10,000, by H. B. Rice, C. L. Rice, Jos. Lipovac and others. Work has begun on erection of plant.

Gulfport—Mercantile.—Hamilton-Weems Grain Co. has been incorporated with capital of \$10,000, by M. S. Hamilton and others.

Laurel—Wagon Factory.—Plans are being made for organization of company to manufacture the patent Padgett six-wheel log wagon. L. B. McCarty can probably give information.

Laurel—Contracting.—Wm. C. Porter Contracting Co. has been incorporated, with capital of \$30,000, for conducting contracting business by Wm. C. Porter, Frank Gardner, W. B. Exum and others.

Meridian—Cotton Compress.—P. J. Krouse has the plans for proposed compress to be erected at cost of \$125,000. E. McMorries, president of the First National Bank, is also interested.

Meridian—Excelsior and Woodworking Factory.—Meridian Excelsior & Manufacturing Co. has been incorporated with capital of \$25,000, for manufacture of excelsior, shingles, boxes, barrels, etc., by John Allen, P. W. Strong, W. B. Strong and others.

Meridian—Electric Power Plant Improvements.—Meridian Light & Railway Co., of Meridian, Miss., Wm. H. Armbrecht, vice-president, of Mobile, Ala., will issue \$750,000 of bonds and increase its authorized capital stock to \$1,000,000 for continued improvements to its property. Company has recently placed orders for 500 k. w. direct connected generator direct connected to a Curtis turbine, and one 300 k. w. rotary converter.

Meridian—Candy Factory.—E. L. Seay, R. C. Higgins, W. Northern and others have incorporated Seay Confectionery Co., with capital of \$25,000, for manufacture of confectionery.

Meridian—Ladder Factory.—Meridian Ladder Co. has been organized with capital of \$10,000, for manufacture of a patent ladder, by S. A. Neville, S. T. Wagoner, C. L. Gray, W. Meeds and others.

Mound Bayou—Saw Mill.—C. C. Hickle, of Brownsville, Tenn., has purchased timber lands and will erect saw mill.

Mount Olive—Cannery.—Chartered: Mount Olive Canning Co., with capital of \$12,000, by J. Parkham, A. G. Walker, W. F. Woodward and others.

Natchez—Cooperage.—Natchez Cooperage Co. has been incorporated, with capital of \$50,000, for manufacture of barrels.

Nola—Mercantile.—Chartered: Nola Mercantile Co., with capital of \$15,000, by Nola White and others.

Ocean Springs—Oyster-Bucket Factory.—P. B. Hand will establish factory for oyster buckets.*

Paris—Clothing Company.—Martin Clothing Co. has been incorporated, with capital of \$5000, by J. B. Martin, E. G. Brown, John J. Ditto and others.

Ripley—Laundry.—Ripley Steam Laundry has been incorporated, with capital of \$2000, by A. U. Given, C. P. O'Riley, G. H. Brooks and others.

Rockbridge—Tobacco Factory.—Chartered: Rockbridge Tobacco Works, with capital of \$3500, by William Ray, E. O. Ray, W. H. Buchanan, R. M. Wright and others.

Rogana—Cannery.—James B. Alexander is

interested in the establishment of a cannery factory.

Salisbury—Electric-Power Plant.—Bill has been introduced in Legislature incorporating Somerset & Wicomico Light, Power & Railway Co. for construction of electric railway, manufacture and sell electricity, construct bridges, etc. Capital stock is \$300,000 and incorporators Marlon L. Brewster, S. Frank Dashiel, Lloyd Riggan, Joshua W. Miles and others, all of Baltimore.

Trenton—Ice Factory.—Robert Johnson will erect ice factory and cold-storage plant.

Trenton—Flour Mill.—Taylor, Enoch & Co. will enlarge flour mill.

Tutwiler—Supply Company.—Delta Supply Co. has been incorporated with capital of \$10,000, by J. M. Powers and others.

Vinta—Flour Mill.—B. F. McGrew, of Pulaski, Tenn., has purchased flour mill at Vinta, and will remodel same, as recently reported, expending \$3000.*

West Point—Brick Works.—Isham Evans, Frank Wolfenden and others have organized the West Point Brick & Manufacturing Co., and will establish plant for manufacture of brick.

MISSOURI.

Cameron—Baking Powder.—Gilliland Baking Powder Co. has been incorporated, with capital of \$10,000, by L. O. Trice, John W. Gilliland, Walter E. Trice and others.

Charleston—Heading Company.—Charleston Heading Co. has been incorporated, with capital of \$15,000, by J. W. and J. G. Rhine.

Chillicothe—Electric-light Plant.—Owen Ford, Consulting Engineer, Security Building, St. Louis, Mo., will draw plans and specifications and make estimates on cost of electric-light plant to be installed by company previously reported as being organized for this purpose.

Columbia—Water Works.—City has voted issue of \$100,000 of bonds for purchase and improvement of Columbia Water & Light Co.'s plant, recently reported. Address The Mayor.

Joplin—Zinc Mines.—Preble Zinc Co. has been incorporated, with capital of \$50,000, by George W. Houck, Joseph Ulrich, J. D. Stiles and others.

Moberly—Real Estate.—Chartered: West End Real Estate & Investment Co., with capital of \$20,000, by W. W. Babcock, John E. Yench, E. O. Doyle and others.

Neosho—Mercantile.—Chartered: Midway Mercantile Co., with capital of \$10,000, by R. B. Rudy, John T. Barlow, George W. Schudler and others.

Orlean—Mining.—Bell Tunnell Mining Co. has been incorporated, with capital of \$25,000, by Charles E. Miller, James M. Smart, James M. Gable and others.

St. Louis—Hay and Grain Company.—Columbia Hay & Grain Co. has been incorporated, with capital of \$20,000, by N. A. Waldron, James B. Hill and others.

St. Louis—Manufacturing.—Trio Patent Production Co. has been chartered, with capital of \$12,000, for manufacturing patent devices, by John McCloskey, Edward A. Sanquinet and Godfrey Klaren.

St. Louis—Jewelry Company.—Hess & Culbertson Jewelry Co. has been incorporated, with capital of \$65,000, by Geo. J. Hess and others.

St. Louis—Chartered: Louisiana Extravaganza Co., with capital of \$35,000, by Harold R. Small, Joseph C. Biggs and others.

St. Louis—Cooperage.—Schaperkotter Cooperage Co. has been incorporated, with capital of \$25,000, by Louis, Louis A. and Louis H. Schaperkotter and others.

St. Louis—Glucose Factory.—St. Louis Syrup & Preserving Co. will establish glucose and syrup factory at cost of \$1,500,000; capacity will be 15,000 bushels of corn per day.

St. Louis—Commission Company.—Chartered: Schaller-Meyer Commission Co., with capital of \$2000, by Hugo Wieger and others.

St. Louis—Publishing.—Chartered: The Interstate Press, with capital of \$10,000, by Edward C. Southard, Howard L. Bergen, George Bergen and others.

St. Louis—Real Estate.—Acorn Realty Co. has been incorporated, with capital of \$3,000, by J. P. Young, Orman J. McCawley and others.

St. Louis—Chemical Works.—William C. Pope Chemical Co. has been incorporated, with capital of \$50,000, by Wm. C. Pope, Geo. T. Meyer and others. Address 114 North Broadway.

St. Louis—Catering.—Chartered: Berger Catering Co., with capital of \$40,000, by

Frederick A. Smith, Joseph A. Duffy and others.

St. Louis—Photo Supply Company.—St. Louis Photo Supply Co. has been incorporated, with capital of \$50,000, by Louis Eiselen, Jr., H. J. Rummeine and others.

Wilston—Cemetery.—Chartered: Greenwood Cemetery Co., with capital of \$10,000, by Adolph and Oscar Foelsch and H. C. Kruger.

NORTH CAROLINA.

Apex—Publishing.—Company will be organized to continue publication of the Apex News, A. J. Wood, editor.

Asheboro—Wheelbarrow Factory.—E. L. Moffit and others have organized Asheboro Wheelbarrow Co., with capital of \$50,000, as recently reported, for manufacture of wheelbarrows; capacity will be 100 per day.*

Burlington—Ice Factory.—Burlington Ice Co. has been incorporated, with capital of \$20,000, for manufacture of ice, by L. Holt and George A. Nicholson.

Charlotte—Cotton Waste Mill.—R. T. Fewell will rebuild cotton waste mill reported burned at a loss of \$12,000.

Cold—Gold Mines.—Hercules Gold & Copper Co. has purchased option on Rudisill and St. Catherine mines, and will install new machinery for extensive developments.

Concord—Cotton Mill.—Gibson Mfg. Co. has voted the proposed increase of capital from \$350,000 to \$500,000, and will probably arrange for enlarging the plant.

Durham—Iron Works.—Durham Iron Works Co. has been incorporated, with capital of \$50,000, by W. R. Kuker and others.

Elizabeth City—Bridge.—Suffolk & Carolina Railroad Co. is preparing to construct bridge across the canal between Martin and Water streets.

Elizabeth City—Knitting Mill.—Elizabeth City Hosiery Co. has authorized an increase of capital from \$10,000 to \$50,000.

Greensboro—Cotton Mill.—Etowah Mills, reported previously, has accepted plans by J. E. Shirr, of Greenville, S. C., for its proposed 15,000 spindle and 450 loom mill. Main structure will be two stories high, 150x250 feet; picker-house, 40x60 feet; weave mill, two stories high, 125x200 feet; dye house and finishing room, 70x125 feet, one story. First installation of power will be 600 horse-power unit, with electrical drive.

Hickory—Water Works.—Date of opening bids for construction of the water works mentioned last week has been postponed to March 15. Expenditure will probably be \$60,000. Plans and specifications at offices of O. Perry Sarle and Edw. W. Shedd, engineers, 146 Westminster street, Providence, R. I., and office of Committee on Water Works at Hickory.*

Ingleside—Woolen Mill.—H. D. Egerton contemplates establishing woolen mill.*

Monroe—Mercantile.—J. Walter Laney is organizing \$8000 company to conduct dry goods business.

Murphy—Furniture Factory.—Don Townes, W. H. Woodbury, A. A. Fain and others are interested in formation of \$35,000 company to establish furniture factory.

Newbern—Bridge.—Pamlico Oriental & Western Railroad will construct bridge 5500 feet long over Neuse river; will be a pile trestle with grade 11 feet above high water and at the ship channel a 150-foot steel drawbridge with a 60-foot opening will be erected. It is reported that the road will be in market for rolling stock and locomotives at an early date. W. A. Cullen Construction Co., 25 Broad street, New York, N. Y., are the contractors for building and equipping the road.

Ottercreek—Saw Mill.—C. F. Williams and T. J. Jones are establishing saw mill.

Patterson Springs—Oil Mill, Cotton Gin, etc.—Patterson Ginning & Milling Co. has been incorporated, with capital of \$20,000, by L. I. Kendrick, J. A. Goode, G. S. Randall and others, for erection of cottonseed oil mill, ginnery, grist mill, corn mill, etc.

Randie—Cotton Gin.—W. H. Pickard will erect cotton gin.

Selma—Cotton Mill.—M. C. Winston and associates will organize a \$100,000 stock company to build a mill of 5000 spindles. No further details have been decided.*

Shelby—Cotton Mill.—Lily Mill & Power Co. has selected site for its proposed \$100,000 cotton mill, reported in November. Mill building will be one story high, 80x352 feet, to contain 5000 spindles for manufacturing fine yarns. Geo. E. Ladshaw, of Spartanburg S. C., hydraulic engineer in charge. Mill architect is Lowell Machine Shop, Lowell, Mass., through its Southern representative, John Hill, of Atlanta, Ga.

Contract for textile equipment has been awarded. Water-wheels and electrical drive will be purchased at an early date. John F. Schenck is president of Lily corporation.*

Silver—Drug Company.—Chartered: Silver Creek Drug Co., with capital of \$5000.

Wilson—Water Works Improvement.—City will expend \$40,000 to extend water mains and sewerage system. Address The Mayor.

Winston-Salem—Excelsior Company.—Salem Excelsior Co. has been incorporated, with capital of \$20,000, by F. H. Fries, Charles Selwers and Ralph Selwers. This is the company reported lately to be incorporated to manufacture excelsior and wooden wool.

SOUTH CAROLINA.

Anderson—Oil Mill and Fertilizer Factory.—People's Oil & Fertilizer Co. has been incorporated, with capital of \$35,000, by L. N. Geer, L. R. Watson and others.

Anderson—Cotton Mill.—Delaware Cotton Co., of Wilmington, Del., states that there is no truth in the rumor mentioned last week that it will build mill at Anderson.

Charleston—Roofing.—Wm. M. Bird Roofing Co. has been incorporated by Wm. M. Bird (president) and H. J. Welch (secretary-treasurer).

Columbia—Gold Mine.—W. J. Murray and J. M. Graham have disposed of a gold mine to parties who will develop.

Columbia—Paint Factory.—Southern Paint Mfg. Co. will be organized by Pennsylvania parties for establishment of paint factory. They have, it is said, leased large ochre properties in Richland county. W. J. Murray may possibly know something of the enterprise.

Dillon—Mercantile.—Chartered: The Till Co., with capital of \$3000, by S. C. and D. H. Till.

Gaffney—Land Improvement.—Turner Land Co. has been incorporated, with capital of \$24,000, by W. A. and J. H. Turner.

Charleston—Mercantile.—T. A. Wilbur & Son, with capital of \$125,000, by Thomas S. Wilbur and Theo. A. Wilbur.

Florence—Mercantile.—Chartered: Beulah Mercantile & Commission Co., with capital of \$25,000, by Samuel R. Chandler and others.

Greenville—Power-house.—Greenville Traction Co., James H. Dawes, general manager, contemplates making extensive improvements to its power-house.

Greenville—Lumber Mills.—Border State Lumber Co. has been incorporated, with capital stock of \$250,000, by R. E. Johnston, W. J. Kreamer and others.

Greer—Cotton Mill.—Victor Mfg. Co., reported in January as possibly to enlarge its plant (27,000 spindles and 700 looms) this year, will meet March 26 to consider increasing capital by \$350,000.

St. Matthews—Mercantile.—Chartered: Cain Mercantile Co., with capital of \$5000, by B. D. Cain and others.

Union—Creamery.—Union Creamery Co. has been organized with capital of \$10,000 by C. G. Voight, of Easley, S. C.; R. E. Palmer, Jno. K. Young and J. T. Harris, for establishing creamery.

Walterboro—Publishing.—J. G. Padgett, J. S. Griffin, J. M. Walker and others have organized company for publication of newspaper.

Yorkville—Knitting Mill.—Endeavors will be made for the establishment of a knitting mill, and M. C. Willis will probably be interested.

TENNESSEE.

Carthage—Electric-light Plant.—Dr. Drake contemplates installation of electric plant for lighting.

Chattanooga—Viaduct.—Bids will be opened March 10 for construction of McCallie street viaduct previously reported. Plans provide for two central spans of 120 feet each and for 815 feet of trestle. Specifications require that each bid must be accompanied by certified check for \$1000 and that a \$10,000 bond will be required. Plans and specifications can be seen at office of county judge. W. Scott Raulston is chairman county court committee.

Chattanooga—Ice Factory.—M. H. Ward will organize \$25,000 company to establish ice factory, recently reported as contemplated.

Chattanooga—Lumber.—J. M. Card Lumber Co. has increased capital from \$20,000 to \$50,000.

Chattanooga—Publication.—W. R. Crabtree will erect three-story brick building and install new equipment for publication of the Press.

Cookeville—Stave Mill.—Nunnally Stave Co. will erect stave mill.

Clarksville—Pickle Factory.—D. C. Woerner, of Liverpool, N. Y., contemplates building pickle factory at Clarksville, as recently reported.

Harriman—Tannery.—Harriman Leather Co. is enlarging its plant as recently reported; has purchased machinery and will install at once equipment for finishing leather.

Highcliff (not a post office)—Cannery.—Highcliff Canning Co. has been incorporated, with capital of \$15,000, by T. E. B. Slier and others, of Nashville, Tenn.

Jacksboro—Coal Mines.—Log Mountain Coal & Coke Co. has been incorporated, with capital of \$10,000, by Thomas Zechlui, Richard B. Baird, W. H. Jenkins and others.

Jackson—Mattress and Quilt Factory.—Patton Mfg. Co., formerly of Nashville, Tenn., and reported recently, has purchased building at Jackson and purchased new machinery for manufacture of mattresses with capacity of 100 a day; will later on install full equipment for manufacture of quilts and comforts.*

Johnson City—Bottling Works.—Johnson City Bottling Works will double capacity.

Johnson City—Wood-working Plant.—J. H. Moser reported recently to establish factory for manufacture of egg crates and dimension stuff has, with S. T. Moser, of Greenville, organized as Moser Bros. and will arrange at once for erection of their plant.

Kingston—Oak-extract Plant.—Company has been organized with capital of \$16,000, by M. A. Crenshaw, of Kingston; J. F. Mary, of Knoxville, Tenn.; James Dawson, of Tellico Plains, Tenn., and S. D. Southwell, of Tellico Plains, for erection of oak extract plant. Company will install three boilers of 150 horse-power each.

Tuckaleechee—Slate Quarries.—Penrhyn Slate Co. has been incorporated, with capital of \$10,000, for developing slate quarries by W. B. Lockett, W. R. Owens, A. J. Price, T. R. Price and others. Address W. B. Lockett, treasurer, Knoxville, Tenn.

Maryville—Woolen Mill.—R. H. Hanna, proprietor of Anchor Woolen Mills, has purchased, and will remove his equipment to, new buildings; important improvements may possibly be undertaken.

Nashville—Bottling Works.—Tennessee Carbonating & Supply Co. has incorporated, with capital of \$10,000, for manufacture of carbonated and non-alcoholic drinks; contracted for complete plant, which will be installed at 302 North Market street. M. J. Hanley, H. L. McNish, J. C. Mayfield, W. H. Hudson and others are incorporators.

Nashville—Brick Company.—Fulcher Brick Co. has been incorporated with capital of \$60,000 by Joseph P. Fulcher, Henry Sperry, R. H. Howell and others, and will succeed the Fulcher & Dyas Brick Co. New machinery will be installed and capacity of plant doubled.

Nashville—Coal Mines and Coke Ovens.—Elite Coal Co. has been incorporated by Lewis M. Scott, Jno. Stone, E. B. Barton and others, all of Campbell county, for development of coal mines, manufacture of coke, etc. Capital is \$10,000.

Paris—Transfer Company.—Chartered: Paris Transfer Co., with capital of \$5000, by J. B. Thomason and others.

TEXAS.

Alvin—Brick Works.—Acton & Killgore will install machinery at once for manufacture of brick from clay on property of Mr. Acton.

Austin—Mercantile.—Davidson & Roland Bros. have been incorporated, with capital of \$40,000, by B. S. Davidson, R. C. Roland and C. E. Roland.

Batson—Power Company.—Batson Power Co. has been incorporated, with capital of \$10,000, to prospect for oil and minerals, by E. A. Jackson, F. S. Pratt and W. D. Wilson.

Beaumont—Oil Company.—Devers Oil Co. has been incorporated, with capital of \$10,000, by L. F. Benchenstein, W. S. Farish and R. L. Blaffer.

Beaumont—Real Estate.—Jef Chaison Townsite Co. has been incorporated, with capital of \$100,000, by Chas. J. Chaison, L. I. Parminter and D. E. Chapin, all of Beaumont, Texas.

Beaumont—Soap Factory.—Tripolene Mfg. Co., organized several months ago with capital stock of \$300,000, is preparing to

erect its proposed plant for manufacturing 15,000 cakes of soap per day. Nearly all the machinery has been purchased. F. E. Carroll, president, and E. A. Luck, one of the directors, are in charge of construction and equipment. This item was reported last week by mistake under the Machinery Wanted column.

Beaumont—Plane Factory.—C. Janke, piano manufacturer, of Galveston, Tex., reported several months ago as investigating with view to establishing piano factory at Beaumont, has purchased site in that city and will soon begin erection of his proposed plant.

Big Sandy—Water Works, Etc.—A. K. Seage Box Co. will repair its dam across Big Sandy creek, recently partly destroyed, and the water-power obtained will be used for generating electricity for lights and power for the city; company also contemplates construction of system of water works.

Breckenridge—Grist Mill and Cotton Gin.—Breckenridge Milling & Ginning Co. has been incorporated, with capital of \$20,000, for general milling and ginning, by H. Black, C. G. Gillette, J. L. Carswell and others.

Buna—Mercantile and Supply Company.—Farmers' Mercantile & Supply Co. has been incorporated, with capital of \$8000, by E. Nanty, W. P. Bond and others.

Gilbert—Cotton Gin.—J. W. Webb will erect cotton gin.

Clarksville—Laundry.—Home Steam Laundry has been incorporated, with capital of \$6000, by J. B. Jennings, of Hillsboro, Texas; J. C. Durrum and W. R. Moore, of Clarksville.

Dallas—Bridge.—Chartered: Texas Pacific Bridge Co., with capital of \$50,000, by M. S. Hasle, M. S. Hasle, Jr., and O. O. Alexander.

Fort Worth—Oil Refinery.—R. A. F. Olcott, president of the Continental Oil Co., of Wichita, Kan., Welsh, La., and Beaumont, Texas, will build \$100,000 oil refinery in Fort Worth with capacity of 1000 barrels a day.

Fort Worth—Brick Works.—Edward Steger, president of the Denison & Bonham Railway Co., and head of the Steger Brick Co., will, it is reported, erect \$100,000 brick works in Fort Worth.

Galveston—Mining and Smelting Company.—Chartered: Meno Mining & Smelting Co. has been incorporated, with capital of \$100,000, for conducting mining business in Arkansas and Texas. J. B. Denison, W. H. Moser, J. H. Hawley, Charles Fowler and others are incorporators.

Hamilton—Ice Factory.—Hamilton Ice & Manufacturing Co. has been incorporated, with capital of \$20,000, for manufacturing ice, electric power, etc., by C. Schwirth, Dallas, Texas; W. A. McSpadden, Cisco, Texas, and B. F. Williams, Hamilton.

Houston—Lumber Company.—Hub City Lumber Co. has been organized for establishment of mills at Houston; company has mills at Houma, La. Wm. Crooks, of Galveston, is president and W. E. Hart, of Houston, manager.

Killeen—Publishing.—Chartered: Killeen Herald Publishing Co., with capital of \$2000, by A. J. Hoover, A. J. Ballard, R. G. Trench and others.

Lake Arthur—Plantation Company.—Klondike Plantation Co. has been incorporated, with capital stock of \$500,000, by W. P. Harrison, W. C. Harrison and T. T. Harrison.

Mabank—Cotton Mill.—The proposition for a cotton mill, mentioned last week, was made by W. L. Young, of Greensboro, N. C., and associates. They contemplate building 20,000 spindle mill, for manufacturing cotton duck. Mr. Young will be president of company to be formed. See item under Paris, Texas.

Marshall—Boiler Shop.—Texas & Pacific Railroad Co. is having plans made for erection of proposed boiler shop. L. S. Thorne, Dallas, Texas, general manager.

Milford—Hardware Company.—Jones Hardware Co. has been incorporated, with capital of \$7500, by John T. Jones and others.

Navasota—Knitting Mill.—H. Schumacher Knitting Mills, recently reported a contemplating the manufacture of yarns it will use in knitting, has been formed by John W. Schumacher and W. B. Wessen. They have let contract for machinery to knit hose, and will install plant at once.

Palestine—Furniture Factory.—H. G. Hill, of Chicago, Ill., is negotiating for purchase of timber lands and contemplates establishing furniture factory.

Palestine—Packing.—Palestine Packing has been reorganized, with capital of \$20,000, by T. M. Campbell, P. W. Ezell, William Broyles and others.

Paris—Cotton Mill.—W. I. Young, of Greensboro, N. C., and associates made the proposition for a cotton mill reported last week, and the Etowah Mills, of Greensboro, has no connection with the proposition. Their plan contemplates a 20,000-spindle mill for manufacturing cotton duck. It is proposed to build also two other mills of same equipment in Texas, and Mr. Young will be president of each company to be formed. See item under Mabank, Texas.

Port Arthur—Refinery.—The Texas Co. has recently purchased 8,000,000 feet of lumber, to be used in enlarging its Port Arthur refinery.

San Antonio—Electric-light and Power Plant.—Alex. and Paul Meerscheidt will install electric-light and power plant on their irrigation farm near San Antonio; electric power to be used for pumping purposes.

Santa Anna—Cotton Compress.—W. A. Norman, L. L. Shield, V. L. Grady, Fred W. Turner and others have organized \$30,000 company for erection of cotton compress.

Santo—Coal Mines.—Santo Coal & Mineral Prospecting Co. has incorporated, with capital of \$5000, to develop coal mine. M. M. Littlefield, president; J. S. Lanham, secretary.

Seguin—Brick Company.—Blumberg Brick Co. has been incorporated, with capital of \$25,000, by C. F. Blumberg, Gus Elley and Fritz Blumberg. Company has purchased and will develop 176 acres of clay land and will establish plant for manufacture of brick near McQueeny. Address C. F. Blumberg.

Sour Lake—Bottling Works.—H. W. Jonchim, of Beaumont, Texas, has purchased bottling works and will improve plant.

Tyler—Ice Factory.—Tyler Ice Co. has increased capital from \$40,000 to \$80,000.

Waxahachie—Water Works Improvement.—City contemplates issue of \$24,000 of bonds for improving its water system. Address The Mayor.

VIRGINIA.

Abingdon—Mercantile.—Chartered: L. A. Palmer Co., with capital of \$10,000.

Alexandria—Brick Works.—A n a c o s t i a Brick Co. has been incorporated, with capital of \$20,000, by W. J. Zeh and others.

Chesterfield—Telephone System.—E. W. Ellison and associates are organizing company for construction of telephone system.

Emporia—Water-power Development.—Greenville Water Power Co. has been incorporated.

Graham.—Bottling Works.—Chartered: Crystal Bottling & Cider Co.

Leesburg—Copper Mine.—Company will be organized for development of copper mine on property of W. H. Robinson.

Marion—Clothing Company.—Chartered: Marion Clothing Co.

Martinsville—Tobacco Works.—Sparrow & Gravely, reported recently to incorporate for enlargement of their tobacco factory, have incorporated as the Sparrow-Gravely Tobacco Co., with capital of not less than \$30,000 nor more than \$50,000.

Milford—Excelsior Mill.—W. N. Blatt & Co. will rebuild excelsior mill recently burned at a loss of \$7000.

Newport News—Launch Plant.—R. W. Perkins and J. W. Hopkins, of the James River Yacht & Engine Building Co., will, it is reported, organize company for establishing naptha-launch factory.

Norfolk—Chartered: American Browsing Co., with capital of from \$10,000 to \$50,000, by W. H. Robinson and others.

Norfolk—Street Improvement.—John T. Bolton has contract at \$17,200 for extending City Hall avenue down the canal from Granby street to Newton street. Specifications call for filling in and bulkheading the canal and laying a 48-inch sewer drain the entire length.

Petersburg—Paint Factory.—Pannill Paint & Oil Co. has secured building, 32 Bank street, and is installing machinery; will make roof paint and the tin cans and boxes used; capacity, 150 gallons of paint per hour. Plant will be operated by electricity. Henry Pannill, manager.

Richmond—Machine Works—Southern Machine Manufacturing Co. manufacturers of gasoline motors, machine repairing and pattern making, will issue \$100,000 of preferred stock for the equipment of a new plant, negotiations for which are pending.

Richmond—Mercantile.—Chartered: Lankford-Singleton Co., with authorized capital of \$6000, by W. H. Lankford and others.

Urbanna—Cannery.—United States Cannery Co., with capital of \$1,000,000, is arranging to establish cannery. W. Key Howard is probably interested.

Waverly—Mercantile.—Chartered: The Fleetwood Co., with capital of \$50,000.

WEST VIRGINIA.

Buckhannon—Brick Works.—Hawkins Brick Co. has been incorporated, with capital of \$25,000, by Thomas H. Hawkins, of Buckhannon; Thomas W. Berry, Chas. H. Bland, L. W. Hawkins, of Sutton, W. Va., and others.

Churchville—Mercantile.—Chartered: Ureka Store Co., with capital of \$10,000, by E. R. Gum and others.

Clarksburg—Picture-frame Factory.—Pryor & Co., manufacturers of picture frames, etc., have opened store on West Main street, and will, later on, remove their factory to Clarksburg.

Clarksburg—Bed Factory.—Ohio Iron & Brass Bed Co., of Eaton, is reported as investigating, with view to establishing plant at Clarksburg.

Elkins—Timber-land Development.—Wildell Lumber Co., M. Wilson, manager, will develop 12,000 acres of timber land at Wildell, reported last week to be developed by M. Wilson and M. N. Wilson; machinery has been purchased, and saw mill will have capacity of 60,000 feet of lumber per day.

Fairmont—Real Estate.—East Fairmont Co. has been incorporated, with capital of \$50,000, by W. D. Pepper, James L. Denney, P. R. Gallard and others.

Fayetteville—Coal Mines.—Dun Glen Coal Co. has been incorporated, with capital of \$100,000, and the work of opening up mines has been commenced.

Keyser—Cannery.—J. M. Brent is interested in organization of company to establish cannery. Address care of Keyser Industrial Co.

Ligon—Furniture Factory.—J. M. Moore and U. B. Buskirk are interested in organization of Hudson School Furniture Manufacturing Co., which will establish factory.

Mahan—Lumber Mill.—J. W. Kitchen, of Ashland, Ky., has purchased interest in and reorganized the T. W. Mahan Lumber Co. J. W. Mahan will remain president. Company has recently installed electric plant, and other improvements are being made.

Morgantown—Coal Mines.—Cochran Coal & Coke Co. at a recent meeting decided to increase capital stock from \$500,000 to \$1,000,000 for purchase and development of 15,000 additional acres of coal lands in Monongalia, Cabell, Grant and Clay counties.

Martinsburg—Timber-land Development.—Noland Lumber Co., recently incorporated, has purchased and will develop large tract of timber land.

Parkersburg—Sand and Dredging Company.—Parkersburg Sand & Dredging Co. has been incorporated, with capital of \$10,000, by L. Cramer, David Boyles, C. E. Morrison and others.

Parkersburg—Laundry.—New Process Steam Laundry Co. has been incorporated, with capital of \$10,000, by B. F. Nern, Paul C. Lehman, Joseph Hile, J. K. Neak, J. B. Atwood and others.

Philippi—Planing Mill.—Philippi Planing Mill Co. has completed organization, electing W. G. Keys, president and general manager; M. R. Chrislip, vice-president; J. Rush Mann, treasurer, and T. B. Bowman, secretary. Capital is \$10,000, and work will be commenced at once on erection of its proposed mill.

Philippi—Water Works.—F. T. Martin, of Oakland and Fairmont, W. Va., and R. B. Tibbs, of Fairmont, have been granted franchise for construction of system of water works at Philippi.

Sun—Coal Mines.—Black Fork Coal Co., reported recently as incorporated, with capital stock of \$200,000, has acquired for development 3000 acres of coal land in Wyoming county.

Thomas—Timber Lands.—Henry G. Davis, of Elkins, W. Va., and associates have purchased 36,000 acres of timber land lying between Thomas and Hendrick, W. Va., for \$1,000,000.

Wellsville—Coal Mines.—R. M. Mozingo is developing 110 acres of coal lands.

Wheeling—Chain Factory.—A. E. Crockett, secretary of the Standard Chain Co., of Pittsburgh, Pa., is investigating Wheeling as site for erection of chain factory.

West Milford—Milling and Lumber Company.—West Fork Milling & Lumber Co. has been incorporated, with authorized capital of \$25,000, by R. C. Kelwick, Edward D. Steel, E. E. Helwick, S. S. Floyd and M. A. Wilson.

Wheeling—Wagon Factory.—Charles L. Davis has purchased and will operate blacksmith and wagon shops.

Wheeling—Garbage Crematory.—City is having estimates made by John Morrison, of Pittsburgh, Pa., on increasing capacity of garbage crematory. Address the Mayor.

INDIAN TERRITORY.

Buck—Coal Mines.—Indian Coal & Mining Co. has incorporated, with capital of \$500,000, to develop coal mines. Incorporators include Mrs. C. R. Craig, of Asheville, N. C.; J. A. Nichols, F. M. Weaver, H. A. Miller and E. R. Craig.

Muskogee—Coal Mines.—Henderson Smokeless Coal Co. will install machinery for further development of its coal mine.

Purcell—Machine Shops, etc.—Gulf, Colorado & Santa Fe Railroad Co., W. C. Nixon, Galveston, Tex., general manager, will enlarge and improve its round-house and machine shops at Purcell, I. T.

OKLAHOMA TERRITORY.

Carpenter—Telephone System.—Elk City Northern Telephone Co. has been incorporated, with capital of \$5000, by Joseph H. Mead and J. A. Hart, of Carpenter; S. J. Tippins, Joseph I. Brothers and D. L. Clift, of Colter.

Guthrie—Developments.—McKinney Development Co. has been incorporated, with capital of \$250,000, by John A. McKinney and William A. Reed, of Checotah, I. T.; Addison F. Gallop, of Blackwell, I. T., and others.

Guthrie—Coal Mines.—Whetstone Coal & Development Co. has been incorporated, with authorized capital of \$250,000, by William M. Bronson, Joseph W. McNeal, of Guthrie; F. A. Whetstone, of Henryetta, I. T., and others.

Guthrie—Lumber.—Chartered: Western Redwood Co., with capital of \$100,000, by J. Alexander and J. E. Nicholson, of San Francisco, Cal., and G. V. Patterson, of Guthrie.

Guthrie—Gas and Oil.—H. L. and E. A. Miller, C. G. Horner and others have incorporated Buckeye Oil & Gas Co., with capital of \$250,000.

Hobart—Improvements.—Hobart Improvement Co. has been incorporated, with capital of \$5000, by W. C. Bolton, W. J. Caudill, A. J. Dunlap and others.

Meers—Milling.—Mt. Sheridan Testing & Milling Co. has been incorporated, with capital of \$10,000, by I. S. Hodge, J. E. Speaks, S. J. Hardin, C. H. Lankard and Eugene Deacon.

Oklahoma—Medicine.—Scotch Medicine Co. has been incorporated, with capital of \$30,000, by C. J. Staake, E. B. Longwell and C. H. Rogers.

Oklahoma City—Gas and Electric Plant.—Syndicate, included in which is T. B. Burbridge, of Cripple Creek, Col., and J. J. Henry, of Denver, Col., has purchased plant of the Oklahoma Gas & Electric Co., and will install additional machinery for increasing capacity; new equipment will include 300 horse-power boiler.

Perry—Mining.—San Marcial Mining & Milling Co. has been incorporated, with capital of \$1,000,000, by F. C. Seids, A. C. Hinde, R. A. Felt and others.

Roosevelt—Mining.—St. James Mining Co. has been incorporated, with capital of \$1,000,000, by J. D. Hutton, A. J. Laughlin, J. B. Linzert and others.

Shawnee—Machinery.—Chartered: American Cigar Machine Co., with capital of \$250,000, by James H. Jacobs, Jos. H. White, W. D. Fugatt and others.

Shawnee—Lumber.—Chartered: McGahan-McKee Lumber Co., with capital of \$75,000, by T. and H. C. McGahan, J. E. McKee, of Shawnee; Murie McKee, of Tecumseh, and others.

Woodward—Lumber.—Big Jo Lumber Co. has been incorporated, with capital of \$60,000 by Edward L. Roberts, Chicago, Ill.; Edward N. McGregor and Hugh N. Roberts, Woodward.

BURNED.

Abilene, Tex.—Windsor Hotel damaged.

Ada, O. T.—A. J. Shirley's cotton gin; estimated loss \$4000.

Fayetteville, N. C.—Hall & Pearsall's warehouse; estimated loss \$24,000.

Haskell, Tex.—Haskell High School. Address The Mayor.

Knoxville, Tenn.—A portion of Knoxville Wheel & Car Foundry.

LaFayette, La.—Adolphe Mouton's grist mill.

Little Rock, Ark.—Arkansas Carpet & Furniture Co.'s warehouse; estimated loss \$75,000.

Lenoir, N. C.—W. B. Watson's lumber yard; estimated loss \$5000.

Lewisburg, Ky.—Lewisburg Mill Co.'s flour mill; estimated loss \$12,000.

Littleton, N. C.—Eugene Johnson's cotton gin; loss about \$5000.

Louisville, Ky.—The City Hall. Address The Mayor.

Louisville, Ky.—Rag factory of Lillow Co. damaged to extent of \$5000.

Louisville, Ky.—A. G. Nagel's bakery; estimated loss \$20,000.

Shreveport, La.—Victoria Lumber Co.'s plant damaged to extent of \$10,000.

Sour Lake, Tex.—Houston Packing Co.'s warehouse; loss about \$5000.

Waverly, Tex.—J. E. Culver's flour mill; estimated loss \$20,000.

Whitewright, Tex.—Grayson College; estimated loss \$30,000.

BUILDING NOTES.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Adairsville, Ga.—Warehouse.—Adairsville Hardware Co. will erect warehouse.

Alexandria, Va.—Bank Building.—Virginia Safe Deposit & Trust Co., recently chartered with Louis Hooff secretary, will erect \$30,000 structure.

Annapolis, Md.—Buildings.—Bill has been introduced in Legislature appropriating \$900,000 for completion of State buildings at Annapolis. Edwin Warfield, governor.

Atlanta, Ga.—Building.—Peters Building will be enlarged by erection of four additional stories at cost of \$50,000. Has at present eight stories. Address E. C. Peters.

Atlanta, Ga.—Round-house.—Louisville & Nashville Railroad Co. has awarded contract to Cook & Laurie, of Montgomery, Ala., for erection of \$80,000 round-house.

Athens, Ga.—Post Office and Court House.—Treasury Department has awarded contract to Moore & Sons, of Nashville, Tenn., at \$64,000, for erection of court house and post office at Athens, Ga.

Augusta, Ga.—C. H. Cohen will erect \$500 residence at 1021 Greene street.

Baltimore, Md.—Business Buildings.—William J. Beardsley, architect, of New York city, and Troy, N. Y., temporary offices in Baltimore at Renner's Hotel, has received contracts to prepare plans and specifications for eight business houses, to be erected in the burned district. He is not yet prepared to state names and address of the owners, but full information will be made public in due time.

Baltimore, Md.—Business Building.—F. Arnold & Sons have purchased building and lot at 310 North Eutaw street, and will expend \$10,000 to remodel the structure for their use as a surgical instrument warehouse and store.

Baltimore, Md.—Office Building.—N. Rufus Gill will erect four-story office building after plans by J. E. Lafferty; to be 28x32 feet, of brick, heated by steam, and cost \$8000.

Baltimore, Md.—Telephone Building.—Cyrus L. W. Eidlitz, of New York, has completed plans for proposed new building, to be erected at corner of Wolfe and Fayette streets for Chesapeake & Potomac Telephone Co.

Baltimore, Md.—Warehouse.—George Bunnell & Sons will remodel building, 563 East Monument street, into a two-story brick warehouse, to be occupied by Warren-Ehret Co.

Baltimore, Md.—Bank Building.—Merchants' National Bank has let contract to Wells Bros., of Philadelphia, temporary Baltimore office in Y. M. C. A., at Charles and Saratoga streets, for reconstructing and repairing its banking building at South and Water streets.

Baltimore, Md.—Warehouses.—Henry S. Rippel, contractor, No. 5 Clay street, is estimating on plans for the reconstruction of four large warehouses of four stories each,

and one warehouse of five stories, all located in the fire district.

Baltimore, Md.—Store Building.—Dr. Henry J. Berkley will rebuild store structure at 14 E. Baltimore street, in the fire district, for occupancy of John Murphy & Co., booksellers and publishers.

Baltimore, Md.—Warehouse.—J. Seth Hopkins will build modern five-story warehouse at 18 and 20 E. Baltimore street, in the fire district.

Baltimore, Md.—Warehouse.—Charles Morton, real estate broker, representative of Mrs. Henry C. Jarret, of Pittsburg, announces that she will contract for erection of four-story warehouse, to cost \$35,000, at 209 E. Baltimore street, in the fire district.

Baltimore, Md.—Library Building.—Edith B. and Emma C. Grafflin have let contract to Thomas P. Johns, at about \$2500, for erection of two-story brick addition at 411 N. Charles street, to be occupied by Booklovers' Library. Plans by Ellcott & Emmart, architects, 323 N. Charles street.

Baltimore, Md.—Warehouse.—C. H. Clasen has accepted plans and specifications by C. C. Buck for erection of brick warehouse and office, 25x60 feet, slag roof, etc., to cost \$3000. J. Henry Miller has received the contract to build.

Baltimore, Md.—Office Building.—James L. Hoffman will erect \$25,000 office building.

Baltimore, Md.—Warehouse.—A. L. Webb & Sons have awarded contract to J. Henry Miller, Dover and Hanover streets, for erection of five-story warehouse, in the fire district.

Baltimore, Md.—Warehouse.—Bibb Stove Co. has let contract to J. Henry Miller, Dover street, near Hanover street, for erection of six-story warehouse, 80x100 feet, after plans and specifications by Owens & Sisco, 14 West Lexington street.

Baltimore, Md.—Store Building.—David W. Bendann, 513 North Charles street, will erect, in the fire district, a four-story brick store building, 17x74 feet, equipped with all modern improvements for facilitating the conduct of an art store. Building will cost about \$15,000.

Baltimore, Md.—Warehouses.—A. D. Sessions & Co., Sharp, near Dover street, will erect three-story brick and iron building, 35x85 feet, to cost \$6500; and one to be three stories high, of brick and iron, 22x35 feet, to cost \$3500. These buildings will be equipped with modern conveniences for conduct of fish commission business.

Baltimore, Md.—Office Building.—E. J. Richardson & Sons, 28 West Lexington street, have awarded contract to Morrow Bros., 216 Clay street, for erection of store and office building in the fire district. Structure to be of brick and stone, 40x60 feet, four stories high, etc., and cost \$40,000. Elevators, electric lights, steam-heating system, etc., will be installed.

Baltimore, Md.—Warehouses.—W. C. Robinson, 336 North street, will build, in the fire district, one warehouse four stories high and two warehouses six stories high each, to be equipped with hydraulic elevators, and probably to be of concrete construction. Full details are yet under consideration. No contracts have been awarded.

Baltimore, Md.—Whiskey Warehouse.—Wilson Distilling Co., warehouses destroyed by the recent fire, has leased an abandoned brewery and will expend \$25,000 to remodel same for warehouse and office. New location, Gay street, near North avenue.

Baltimore, Md.—Dwellings.—John F. Carter, 1505 North Bruce street, has begun work on the construction of twelve brick dwellings, to cost \$11,000. Furnace heat will be used.

Baltimore, Md.—Warehouse.—R. H. Spedden, 18 South Pulaski street, has contract from Henry S. Thorne to build two-story warehouse, 26x90 feet, at 117 Centre Market Space, in the fire district.

Baltimore, Md.—Warehouse.—James Robertson Mfg. Co. has let contract to John Waters, Centre and St. Paul streets, for erection of warehouse, brick on a concrete foundation, flat tin roof, 43x86 feet, etc., to cost \$9000. Location, in the fire district.

Baltimore, Md.—Warehouse.—Joseph H. Thomas will build, in the fire district, four-story warehouse, 48x116 feet. No further details decided.

Baltimore, Md.—J. Latimer Hoffman, Jr., contemplates the erection of five-story office building at 11 East Lexington street, in the fire district; lot is 30x115 feet. Electric elevator, steam heat and other modern facilities will be provided. Ground floor will be finished for modern lunch room.

Baltimore, Md.—Warehouses.—S. B. Sexton Stove & Mfg. Co., 521 West Conway street, has awarded contract to L. B. McCabe Contracting Co., 14 East Lexington street, to raze ruins and clear site of three building lots preparatory to arranging for reconstruction of warehouses destroyed by the recent fire.

Baltimore, Md.—Store Building.—It is reported that Henley Smith, of Washington, D. C., will erect marble building, to cost \$100,000, at 13 East Baltimore street, in the fire district, for the occupancy of the Hennegan-Bates Co., which occupied the burned building as a jewelry store.

Baltimore, Md.—Warehouse.—Lemuel T. Appold, vice-president of Colonial Trust Co., Saratoga near Charles street, will build three-story warehouse, 62x180 feet, of red brick. Contract for erection awarded to B. F. Bennett.

Baltimore, Md.—Warehouses.—William Lanahan & Son, temporary offices at 205 West Camden street, will build two warehouses, six or eight stories each, to be equipped with electric lights, elevators and steam heat. Cost not finally determined as yet. Location of structures, in the fire district.

Baltimore, Md.—Warehouse.—Red C Oll Mfg. Co., 206 Hanover street, will build five-story brick and stone warehouse and office in the fire district. No further details have been decided.

Baltimore, Md.—Office Building.—Henry S. Rippel will erect three-story office building, copper bay front, 22x68 feet, to be equipped with such modern facilities as steam heating, electric lights, etc. Mr. Rippel will take bids on plastering, plumbing, steam heating, millwork, glass, painting, stone work, electric wiring, electrical fixtures, etc. Offices at 7 Clay street.

Baltimore, Md.—Store and Office Building.—Neudecker Tobacco Co., 29 S. Howard street, has awarded contract to Chas. L. Stockhausen, Room 8 Hoen Building, for erection of store and office building in the fire district, four stories high, 30x87 feet, of brick and steel, with terra-cotta trimmings, etc., to be equipped with electric lights, steam heat and a 6x6 hydraulic elevator. Bids will be wanted for this elevator complete in position.*

Baltimore, Md.—Elevator.—Neudecker Tobacco Co., 29 S. Howard street, will take bids on furnishing equipment and installing complete, ready for operation, a 6x6 hydraulic elevator. This is to be installed in building just contracted for. Elevator is to run 50 feet.

Baltimore, Md.—Warehouse.—Neudecker Tobacco Co., 29 S. Howard street, has awarded contract to Chas. L. Stockhausen, Room 8 Hoen Building, for erection of warehouse three stories high, 28x92 feet, of brick and steel, with terra-cotta trimmings. Structure to be located in the fire district.

Baltimore, Md.—Office Building.—Chas. L. Stockhausen, contractor and builder, Room 8 Hoen Building, will erect, for his own use, four-story building, 22x50 feet, of brick and steel, with terra-cotta trimmings, hand elevator, etc. Structure will be located in the fire district.

Baltimore, Md.—Warehouse.—National Building Supply Co., Lexington and North streets, has had plans prepared for erection of warehouse in the fire district. Structure to be 53x83 feet in size, of brick and steel construction with concrete foundation, and have electric lights, hand elevator, etc. Contract for erection awarded to Chas. L. Stockhausen, Room 8 Hoen Building.

Baltimore, Md.—Office Building.—Union Trust Co. has awarded contract to Wells Bros., Charles and Mulberry streets, for cleaning out and making ready for repairs the Union Trust Building. Contract for repairs has not been awarded.

Baltimore, Md.—Paint Factory.—H. B. Davis Co. will reestablish its paint manufacturing plant, destroyed by the recent fire. Temporary location, Eighth and Pratt streets.

Baltimore, Md.—Banking Office.—Mercantile Trust & Deposit Co., temporary offices at 610 Cathedral street, will expend about \$50,000 to repair their office building, damaged by the recent fire, the improvements to be largely confined to the banking room proper. Joseph E. Sperry, architect, 39 Builders Exchange, has prepared plans and specifications for the work.

Baltimore, Md.—Silverware Plant.—Conrad Klank will erect store and factory building for his silverware plant; old location at Charles and Lombard streets, destroyed by the fire.

Baltimore, Md.—Store Building.—William

M. Justis will erect store building to replace burned structure in the fire district.

Baltimore, Md.—Office Building.—James Piper, Centre street near Charles street, will erect office building five stories high, of brick and cast iron, to have electric lights and two elevators, and other modern conveniences for office facilities. Lord & Hewlett, architects, of New York, will furnish the plans and specifications. They are represented in Baltimore by Bayard Turnbull, at 520 N. Charles street. Building noted is to be erected in the fire district and be complete in four months. Contract not awarded.

Baltimore, Md.—Office Building.—H. E. Gilbert has awarded contract to I. F. Ridinger, 223 St. Paul street, to erect office building, of brick and iron, 29x63 feet, to cost \$2500. Will have electric lights, steam heat, etc.*

Baltimore, Md.—Office Building.—Henry Brauns, Builders' Exchange, has contract to prepare plans and specifications for reconstructing Chamber of Commerce building, in the fire district. Structure: five stories high, brick, stone and fire-proof construction, steam heat, electric lights, tiling, etc. Probably \$100,000 and more will be expended.

Baltimore, Md.—Office Building.—R. C. Clarkson, of Brooklyn, N. Y., will erect office building, four stories, 40x90 feet, to cost \$160,000. It is reported that John C. Walsh, architect in charge, 706 Coney Island and Avenue, Brooklyn, N. Y., will prepare the plans and receive bids until April 3 for the construction work. Building will have steam heat, electric lights, ornamental brass and iron work, etc.

Baltimore, Md.—Warehouses.—Jackson C. Gott, 210 N. Charles street, will prepare plans and specifications for three warehouses, each to be five stories high, 60x100 feet, of brick, stone and iron, costing \$100,000. He will also prepare plans for \$125,000 warehouse for Oliver Pearre. The buildings are to be located in the burned district.

Baltimore, Md.—Warehouse.—J. W. Frick will build warehouse, four stories, 50x75 feet, of brick and stone, with electric lights, steam heat, etc., to cost \$75,000, in the fire district. Offices at Charles and Barnett streets.

Baltimore, Md.—Residence.—S. Thanhauser has received plans from Wm. H. Hodges for three-story, 21x63-foot residence, of brick and stone, and let contract to John T. West for erection. Cost, \$10,000.

Baltimore, Md.—Warehouses.—Frank Brown has awarded contract to B. F. Bennett for erection of a number of warehouses, in the fire district.

Baltimore, Md.—Apartment House.—Thomas W. Brundige will remodel apartment house after plans by Charles E. Cassell & Son.

Baltimore, Md.—Bank Building.—Maryland Savings Bank, temporary offices Saratoga near Charles street, will erect banking and office building, five or six stories high, in the fire district.

Baltimore, Md.—Warehouse.—I. F. Ridinger, 223 St. Paul street, has contract to build five-story brick and iron warehouse, in the fire district, at cost of \$7000.

Batesville, Ark.—Court House and Post Office.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids March 31 for construction (except heating apparatus) of U. S. Post Office and Court House. Drawings and specifications may be had at office of supervising architect or at office of postmaster at Batesville.

Birmingham, Ala.—Temple.—Masonic Temple Association, John G. Smith, president, will soon begin erection of proposed structure, seven stories high.

Birmingham, Ala.—Temple.—The Fraternal Hall Association has been organized, with capital of \$10,000, to erect temple reported last week to be built by the Knights of Pythias and Odd Fellows' Association jointly. \$30,000 of bonds will be issued for erection of four-story building. Address for particulars, Emil Lesser, of Phoenix Lodge, No. 25, and Ell P. Smith, of Birmingham Lodge, No. 85.

Birmingham, Ala.—Hotel.—Mrs. Jane E. Torrey will, it is reported, erect five-story hotel.

Brunswick, Md.—Lodge Building.—Frank H. Jackson, architect, 1419 G street N. W. Washington, D. C., will open bids March 25 for erection of three-story brick building for Order of Red Men. Plans and specifications from architect on payment of \$5, or can be seen at office of John L. Jordan, Brunswick.

Carthage, Mo.—School.—Charles Smith, Kansas City, Mo., and Garstang & Rea, Joplin, Mo., have prepared plans for three-story school building, 65x135 feet, to cost \$100,000.

Bueno Vista, Ga.—Jail.—County Commissioners are asking for bids on erection of new jail.

Chattanooga, Tenn.—School Buildings.—City contemplates erection of three new school buildings. Address The Mayor.

Charlotte, N. C.—County Home.—James A. Jones has received contract at \$15,722 for erection of Mecklenburg county's county home, previously reported.

Columbia, S. C.—Penitentiary Buildings—D. J. Griffith, superintendent South Carolina Penitentiary, Columbia, S. C., will open bids March 9 for erection of two buildings at South Carolina Penitentiary, in accordance with plans and specifications furnished by A. W. Todd, architect, Charleston, S. C. One building is for officers and guard quarters, and one for hospital. Separate bids for each building must be made. Bids for officers and guards quarters must be accompanied by certified check for \$250, and bids for hospital building by check for \$100; \$5000 bond required and usual rights reserved.

Dallas, Ga.—School.—City will erect school building. Address The Mayor.

Dallas, Texas—Apartment House.—B. P. O. E. contemplates erection of five story apartment house.

Dallas, Texas—Warehouse.—August A. Busch & Co., of St. Louis, Mo., have had plans made and will award contract for erection of two-story brick cold-storage warehouse in Dallas.

Dublin, Ga.—Auditorium.—Dublin Chautauqua Association will build auditorium.

Elizabeth City, N. C.—Warehouse, etc.—Suffolk & Carolina Railroad Co. has awarded contract to George L. Borum, of Suffolk, Va., for erection of its proposed warehouses and depots at Elizabeth City.

Farmington, Mo.—Church.—First M. E. Church has awarded contract for erection of its proposed \$9000 structure; building will be of white stone.

Fort Screven, Ga.—Buildings.—Jos. T. Davidson, Merchants' National Bank Building, Savannah, Ga., will open bids March 22 for constructing, plumbing, heating and electric wiring nine frame buildings at Fort Screven. Information furnished on application. United States reserves usual rights.

Galveston, Tex.—Buildings.—War Department has ordered preparations of plans and specifications for rebuilding Fort Travis at Galveston. Captain S. E. Allen, Fifteenth Battery, San Antonio; Captain Edward Judd, Corps of Engineers, and Captain L. P. Fleming, Constructing Quartermaster at San Antonio, are detailed a board to prepare plans for the improvement.

Granger, Tex.—Church.—Methodist congregation will erect \$5000 church. Address The Pastor.

Greensboro, N. C.—College.—Greensboro Female College, recently burned, will be rebuilt.

Guyton, Ga.—Bank Building.—Effingham County Bank will erect office building.

Houston, Texas—School Building.—R. N. Little, secretary school board, will receive plans and specifications until March 15 for nine-room three-story school building. Cost, \$25,000. Usual rights reserved.

Hardinsburg, Ky.—Lodge Building.—Ancient Free & Accepted Order of Masons will erect three-story brick building at cost of \$5000.

Harrisonburg, Va.—Business Building.—Abel Miller will erect business building.

High Point, N. C.—Bank Building.—Wachovia Loan & Trust Co., F. H. Frles, president, Winston-Salem, N. C., will erect two-story granite bank building at High Point, 25x90 feet.

Hopkinsville, Ky.—Depot.—Louisville & Nashville Railroad Co. has accepted plans and will award contract at once for erection of its proposed brick depot at Hopkinsville; cost \$20,000. George E. Evans, general manager, Louisville, Ky.

Houston, Texas—Hotel.—H. Lippett and G. Clede have purchased site at \$25,000 on which will be erected building to be used either as hotel or opera house.

Jacksonville, Fla.—Orphanage.—Daniel Memorial Orphanage will erect additional two-story building.

Johnson City, Tenn.—Business Building.—R. C. Hunter and C. J. Broyles will erect two-story brick building.

Johnson City, Tenn.—Opera House.—The Jobe heirs, of Johnson City, and Mr.

Massengill, of Bristol, will award contract at once for erection of \$10,000 opera house.

Johnson City, Tenn.—Business Building.—Wade H. Patton will erect three-story brick business building.

Kansas City, Mo.—Theatre.—Chartered: Krug Theatre Co., with capital of \$40,000, by M. M. Hudson and E. D. Stahlr.

Knoxville, Tenn.—Residence.—S. G. Shields has awarded contract to L. A. Galyon, at \$7000, for erection of his proposed residence.

Knoxville, Tenn.—Leon Beaver, architect, will open bids March 14 for labor and material necessary to build an addition to hospital for insane (Eastern Division). Plans and specifications at architect's office. Usual rights reserved.

Latonia, Ky.—School.—Plans of B. C. Decamp and W. W. Franklin, Glenn Building, Cincinnati, Ohio, have been accepted for \$25,000 school building. Bids will be asked in about two weeks. Address Board of Education.

Latonia, Ky.—Warehouse.—Schofield & Rabbe, 616 Madison avenue, Covington, Ky., are preparing plans for converting Latonia hotel into warehouse for L. Marks & Bro., of Cincinnati, Ohio. Cost, \$20,000.

Laurel, Miss.—Business Building.—Fatherree Hardee Co., capital \$20,000, has had plans made for erection of business building.

Lexington, Ky.—Lodge Building.—United Brothers of Friendship & Sisters of the Mysterious Ten will erect four-story lodge building to cost \$6000.

Louisville, Ky.—Apartment House.—J. B. Hutchings has made plans for proposed Frank Parfitt apartment house.

Lexington, S. C.—Mercantile.—Chartered: Lexington Department Store, with capital of \$20,000, by F. W. Oswald and others.

Madisonville, Ky.—Business Building.—Forbes & Bro., of Hopkinsville, Ky., have contract for erecting proposed business building of Bailey & Co. James L. Long, of Hopkinsville, prepared the plans.

Meridian, Miss.—Store Building.—Winner, Klein & Co., will erect three-story brick storehouse, 75x75 feet.

Memphis, Tenn.—Residence.—I. Mendel has plans prepared for two-story residence to cost \$20,000.

Mineral Wells, Tex.—Directors of the Chautauqua Association will build hall with seating capacity of 5000.

Mobile, Ala.—Bank Building.—City Bank & Trust Co. has accepted plans for proposed structure and will award contract at once for erection.

Mobile, Ala.—Bank Building.—City Bank & Trust Co. has accepted plans for proposed six-story structure and will soon award contract.

Moundsville, W. Va.—Jail.—Court of Marshall county has accepted plans of Van Dorn Iron Co., of Cleveland, Ohio, for new jail building at Moundsville. Bids for erection will be opened March 8. J. K. Chase, clerk county court.

Mt. Pleasant, Tenn.—Church.—Episcopal congregation will erect new church. J. T. Craig, H. D. Ruhm and E. L. Gregory have been appointed building committee, and contract is said to have been awarded to Roy Alford.

Mt. Sterling, Ky.—Warehouse.—J. F. Lebo has had plans made by Ed. L. William for erection of three-story brick warehouse to cost \$6500.

Napoleonville, La.—School.—John Marks, secretary school board, will open bids March 7 for erection and completion of two-story brick school building, according to plans and specifications which may be had at office of Favot & Livaudais, architects, 839 Gravier street, New Orleans, La. Each bid must be accompanied by certified check for \$150. Bond required and usual rights reserved.

Nashville, Ga.—School.—City will build \$10,000 school house. Address The Mayor.

Nashville, Tenn.—Warehouse.—Nashville Builders' Supply Co. recently reported as organized and to erect warehouse, has decided to build structure, 180x60 feet, at a cost of \$8000.

New Orleans, La.—School.—Robert Palestine, with offices in Macheca Building, has been awarded contract for erecting the proposed St. Joseph Parochial School, previously reported to be erected at cost of \$73,400.

New Orleans, La.—Hotel.—Dr. Pratt is reported as contemplating the erection of a hotel on St. Charles street.

New Orleans, La.—Business Building.—H. Uthoff will repair his building recently damaged by fire; cost, \$6000.

New Orleans, La.—Residence.—Charles Manson has had plans made for erection of \$10,000 residence.

Norfolk, Va.—Bank Building.—Building committee appointed by Commercial Realty Co. has selected plans of Parker & Thomas, 621 N. Calvert street, Baltimore, Md., for proposed structure for National Bank of Commerce. Building will be from 12 to 14 stories high and equipped with latest apparatus for lighting, heating, ventilating, etc.

Opelika, Ala.—City Hall, Engine House, etc.—The city will build city hall and engine house; engine house will be two stories, 60x100 feet. Neither architect or engineer has been engaged. Address J. G. Palmer, mayor.*

Pensacola, Fla.—Bank Building.—First National Bank has purchased site and will soon begin erection of proposed seven-story bank and office building.

Port Gibson, Miss.—Rectory.—J. F. Barnes prepared plans and has contract for erecting proposed Episcopal rectory.

Portsmouth, Va.—Warehouse.—Oliver Refining Co. will rebuild storage warehouse recently burned. Building will be 52x100 feet.

Richmond, Va.—Capitol Improvement.—Congress has passed bill appropriating \$250,000 for repairs to State Capitol. Plans have been prepared by J. K. Peebles, of Norfolk.

Savannah, Ga.—Business Building.—B. H. Levy & Bro. have awarded contract to J. R. Eason & Son for erection of proposed one-story addition to their building, for which H. W. Witcover prepared plans.

Shreveport, La.—Temple.—B. P. O. E. contemplate erecting \$50,000 lodge building.

Shreveport, La.—Depot.—Texas & Pacific Railroad Co., L. S. Thorn, Dallas, Tex., general manager, will make extensive improvements at Shreveport, including erection of freight depot.

St. Augustine, Fla.—Business Buildings.—S. C. Edminster will erect two business buildings.

St. Louis, Mo.—Fair Building.—Contract for Georgia Building has been let to James Lawrence Brown & Co. at \$20,000.

St. Louis, Mo.—Dwellings.—Thompson-Stearns Co., of New York and Chicago, has contract for erecting proposed Garrick Theatre, previously mentioned.

St. Louis, Mo.—Dwellings.—Fair Building Co. will erect four dwellings at cost of \$14,000 each.

Talladega, Ala.—School.—J. E. Hollingsworth & Co., of Ensley, Ala., have contract to erect school building. Contract price \$8000.

Tampa, Fla.—Bank Building.—Sealed proposals will be received until March 10 for erection of four-story business building for American National Bank of Tampa. Plans and specifications may be inspected at office of Miller & Kennard, architects. Each bid must be accompanied by certified check for two per cent. of amount of same. Usual rights reserved.

Terrell, Tex.—Lodge Building.—B. P. O. E. have had plans prepared and will soon begin erection of its proposed lodge building, which will be two stories, of brick, 56x96 feet, and cost \$8000.

Washington, D. C.—School.—Isadore Parvarini has contract at \$166,800 for erection of school structure.

Washington, D. C.—Warehouse.—Chas. E. Cassell, Charles and Saratoga streets, Baltimore, Md., will make plans for five-story fireproof warehouse to cost \$50,000.

Water Valley, Miss.—Dormitory.—Mississippi Orphans' Home will erect new building for dormitory as reported last week; will be two stories, 60x120 feet, and cost about \$15,000. Address Rev. W. T. Griffin, manager.*

Washington, D. C.—Warehouse.—Mt. Vernon Baptist Church is arranging for erection of its proposed \$50,000 edifice. Address the Pastor.

Wilson, N. C.—Stables.—J. T. Edwards & Co. will erect large brick stables.

Wilson, N. C.—Business Houses.—J. T. Wiggles will erect four brick business buildings.

Wilson, N. C.—Warehouse.—Cozart, Eagles & Cox will rebuild warehouse recently burned.

Yarnallton, Ky.—Church.—Mt. Vernon Baptist congregation has had plans made by J. R. Scott, of Lexington, Ky., for erection of proposed \$8000 structure. Bids will be received until March 15.

RAILROAD CONSTRUCTION.

Railways.

Alexandria, La.—Messrs. William Polk & Co. write the Manufacturers' Record that the proposition to build a railroad from Natchez, Miss., via Alexandria to Lufkin, Tex., is not yet in sufficiently definite shape to state details, but that they feel certain that the line will be constructed.

Ansted, W. Va.—The Deepwater Railway Co. has, it is reported, been given a favorable decision in its right of way suit in the Circuit Court at Princeton, which, it is stated, permits it to build its line to the Flat Top Coal Fields. B. N. Page is chief engineer.

Asheville, N. C.—Engineers are reported surveying under charge of W. A. Kite, in Yancey county, for a railroad 15 miles long, Asheville parties being interested.

Atlanta, Ga.—B. M. Hall, chief engineer of the Atlanta & Marietta Electric Railway Co., is reported as saying that a new route has been selected for the road which will be a mile shorter than the projected line, the franchise for which was allowed to lapse. Mr. Hall states that the line will certainly be built.

Atlanta, Ga.—Mr. J. S. B. Thompson, general agent of the Southern Railway Co., writes the Manufacturers' Record that the plans for the proposed Southern Bell Railway are not sufficiently developed to permit of giving any definite information. He confirms the report that it will be merely a connecting track between the already existing tracks of the Southern Railway entering Atlanta and its total construction will hardly exceed three miles.

Baltimore, Md.—The Baltimore & Ohio Railroad Co. will, it is reported, build three long safety switches on the 17 mile grade as a protection against wrecks from runaway trains. D. D. Carothers is chief engineer.

Birmingham, Ala.—T. C. Purdy, vice-president and general manager Birmingham, Montgomery & New Orleans Railway, is reported as saying that the proposed line is being located, engineers doing work between Bessemer and Billingsley, Montgomery and Greensboro, and Centerville and Meridian, and that contracts will be let in July.

Charleston, S. C.—The Fairfield Railroad Co. has applied for a charter, the incorporators being R. Goodwin Rhett, T. M. Waring and B. R. Heyward, the purpose being to construct a railroad between Rockton and Alston, S. C., about 20 miles. The petition says about 14 miles has been already constructed, but that this will be partly changed.

Charlestown, W. Va.—The P. T. Noland Lumber Co. will, it is reported, build a lumber line of railroad to connect with the Baltimore & Ohio, near Green Springs, W. Va.

Collins, Ark.—The Drew Lumber Co. It is reported, is building a railroad about 18 miles long to pine timber lands.

Columbia, Ky.—W. K. Azbill, of Columbia, has, it is reported, presented to Joshua D. Powers, president of the United States Trust Co. of Louisville, Ky., and C. C. Tennis, president of the Tennis Construction Co. of Pittsburgh, Pa., a proposal from the citizens of Columbia to subscribe \$150,000 toward building an electric railway from Columbia to Lebanon, connecting there with the Louisville & Nashville Railroad. Surveys have been made by the Tennis Construction Co. and the line would be 45 miles long.

Columbus, Ga.—Lemuel E. Miller, of Philadelphia, contractor for the proposed Birmingham, Columbus & St. Andrew's Bay Railroad, is quoted as saying that work will begin within a month between Chipley, Fla., and St. Andrew's Bay, about 50 miles. W. Miller Gordon, of Columbus, is president of the company.

Cranberry, N. C.—George W. Hardin, superintendent of the East Tennessee & Western North Carolina Railroad, is reported as saying that an extension will be built between Johnson City and Elizabethton, work starting in the spring.

Dallas, Tex.—Mr. John G. Hunter, secretary of the Dallas Commercial Club, writes the Manufacturers' Record that no organization has yet been formed to build the proposed electric railway to Waxahachie.

Dallas, Tex.—Reported that the Texas & Pacific Railway will extend the Weatherford, Mineral Wells & Northwestern Branch to Trinidad, Col., about 500 miles. Mr. George J. Gould is said to have made that statement. B. S. Wathen is chief engineer at Dallas.

Dallas, Tex.—George T. Atkins is re-

ported to be working on a plan for an electric railway connecting Dallas, Waxahachie, Hillsboro and Waco.

Darien, Ga.—The Darien & Western Railroad will, it is reported, build an extension. F. H. MacFarland is president and general manager.

Dublin, Ga.—The Dublin & Southwestern Railway Co. has graded about one mile of line for its proposed road. J. P. Pughes is chief engineer.

Elk City, O. T.—Mr. I. C. Thurmond, cashier of the First National Bank, who is also president of the Kansas, Elk City & Texas Railroad Co., writes the Manufacturers' Record that it is expected to start the survey this week.

Elkins, W. Va.—The Coal & Coke Railway Co. will receive bids until March 10, at the office of W. H. Bower, general manager, at Elkins, W. Va., for grading 30 miles of single-track line between Frenchton, W. Va., to the mouth of Copen Run in Braxton county, W. Va. A. A. Chapman is engineer at Weston, W. Va.

Fort Myers, Fla.—The track on the Atlantic Coast Line extension has been completed to Fort Myers.

Fort Worth, Tex.—The Fort Worth & Denver City Railway proposes to spend this year \$150,000 for betterments, including the laying of heavier rails. F. T. Dolan is general superintendent.

Galveston, Tex.—The Gulf & Interstate Railroad is reported to have employed A. C. Titus, of Ottawa, Kans., to survey for an extension from Winnie to Lufkin, Tex., 115 miles. L. P. Featherstone is president of the company.

Grafton, W. Va.—A. P. Dennis, of Rinehart & Dennis, contractors, is quoted as saying that construction on the Wabash extension will be resumed April 1, the firm having been directed by the railroad officials to begin work then.

Greenville, S. C.—S. H. Knight, chief engineer of the Union Traction Co. of Indiana, is reported as making the survey for the proposed Greenville & Anderson Electric Railway, in which Dr. Geo. E. Coughlin, of Indianapolis, and others are interested. Dr. Coughlin is now at Greenville.

Greenwood, Miss.—Mr. Sam. R. Weems, vice-president and general manager of the Weems-Lockwood Furniture Co., and who is also secretary and treasurer of the Board of Trade, writes the Manufacturers' Record that Mr. A. B. Andrews, first vice-president of the Southern Railway, informs the Board that he will make a personal investigation of the proposed extension of the Itta Bena Branch from Webb, Miss., to Memphis, Tenn.

Huntington, W. Va.—The Huntington & Charleston Railroad Co. has been chartered, to build either a steam or electric railroad from Huntington to Charleston, W. Va., about 50 miles. The incorporators are W. R. Thompson, E. M. Watts, T. J. Bryan, A. E. Bush, Z. T. Vinson, all of Huntington.

Kansas City, Mo.—Stephen A. Mitchell, chief engineer Kansas City & Lexington Electric Railway Co., writes the Manufacturers' Record that the location survey has just been completed, and it is expected that matters will be in shape to receive bids for construction not later than April 1, the line to run from Kansas City to Lexington, Mo., 44 miles.

Kosciusko, Miss.—George R. Turner, promoter of the Louisiana Sugar Belt Railroad, is reported to have been advised by the chief engineer, Charles C. Breed, of Thibodaux, that the surveys are complete. Nearly all rights of way have been secured and actual construction is to begin this spring.

Keyser, W. Va.—Plans are under consideration to build an electric railway from Keyser to Moorefield and Petersburg, W. Va., about 40 miles. Among those interested are F. M. Reynolds, Col. T. B. Davis, J. H. Markwood, J. William Gilkeson, J. H. Swisher, Dr. F. L. Baker, T. R. Carskadon, George B. Shank, David Arnold, Captain J. W. Vandiver, James T. Carskadon, T. C. Dyke, George T. Leatherman.

Lexington, Ky.—The incorporators of the Fayette Interurban Traction Co., which proposes to build electric railways from Lexington to Versailles, Winchester, Nicholasville and Richmond, are C. J. Bronston, president of the Southern Mutual Investment Co.; Louis des Cognets, president of the Lexington Railway Co.; J. Waller Rodes, cashier of the Phoenix National Bank; P. G. Powell, W. W. Bain, T. L. Young and T. Hughes Bronston.

Lexington, Ky.—The Lexington & Eastern Railway may, it is reported, build an

extension from its present terminus at Jackson, Ky., for the purpose of developing coal fields in Breathitt county.

Lexington, Mo.—Mr. Gustave Haerle, president of the Lexington Water Co., writes the Manufacturers' Record that he proposes to build an electric railway from R. & L. Junction to some point on the Chicago & Alton Railroad.

Louisville, Ky.—Reported that the Atlanta, Knoxville & Northern Railroad (Louisville & Nashville System) will build its own track from Marietta, Ga., into Atlanta, about 20 miles. R. Montfort is chief engineer.

Luxora, Ark.—The Luxora, Evening Shade & Northwestern Railroad is reported to have awarded the grading contract for the first 10 miles to H. P. Liston. Secretary N. W. Connolly is also authorized to contract for rails and track material.

Macon, Ga.—The Macon, Dublin & Savannah Railroad is reported to have under consideration plans for building an extension to Brunswick, Ga., about 90 miles. J. T. Wright is vice-president and general manager at Macon. He writes the Manufacturers' Record that the report is premature and unfounded.

Magnolia, Miss.—Mr. Lucian E. Schilling writes the Manufacturers' Record that a survey is being made for an electric railway connecting Magnolia, Fernwood, McComb City and Summit, Miss., 12 miles, construction to begin as soon as preliminary work is completed.

Manilla, Ark.—D. A. Smith & Sons are reported to be arranging for the construction of the Manilla & Southwestern Railroad, 19 miles long. It will connect with the Frisco at Culberhouse.

Nashville, Tenn.—The Wilder Branch of the Tennessee Central Railroad, from Crawford to Wilder, in Fentress county, has been completed to reach the mines of the Fentress Coal & Coke Co.

Nashville, Tenn.—An officer of the Tennessee Central Railroad writes the Manufacturers' Record concerning the press report that a line would be built from Crossville to the Laurel Fork Coal Fields and saying that he knows of no such construction to be done by that company or any other company.

New Orleans, La.—James Z. George, of New Orleans, is reported to be surveying for the proposed electric railway between Summit and Magnolia, Miss., 10 miles.

Newton, Miss.—All the grading south of this town on the Mobile, Jackson & Kansas City Railroad is completed and the track-laying is within 20 miles of Newton, about three-fourths of a mile of track being built daily. The completion of this will make a line through to Mobile.

New York, N. Y.—The W. A. Cullen Construction Co., 25 Broad street, contractors for the Pamlico, Oriental & Western Railway, are reported as saying that the grade is practically completed for the lines which will be 55 miles long from Newbern, N. C., northwest to a point on Pamlico Sound.

Louisville, Ky.—The Kentucky Tract Co., in which H. S. McNutt and others are interested, will, it is reported, soon begin construction of the proposed line to West Point, it being their purpose to carry it through to Nashville, Tenn.

Oklahoma City, O. T.—The Missouri, Kansas & Oklahoma Railroad is reported to have under consideration a plan to build a line from Oklahoma City to Chickasha and thence through Caddo, Kiowa and Greer counties to a point on the Red river.

Oklahoma City, O. T.—The Oklahoma, Roswell & White Mountain Railway Co. has been organized with \$5,000,000 capital and a horseback survey has been made from Mangum, O. T., to Roswell, N. M., and the White Mountains, 400 miles. The officers are John W. Graves, Oklahoma City, president; Isidor B. Rose, Roswell, N. M., first vice-president; B. J. Clardy, Shawnee, Ok., second vice-president; S. A. Byers, secretary, and O. S. Russell, treasurer, both of Oklahoma City.

Oklahoma City, O. T.—Reported that the Oklahoma City & Northwestern Railroad Co. will be organized to build a line from Oklahoma City to Denver, Col., by C. G. Jones and F. N. Finney, of Oklahoma City, the latter being president of the Missouri, Kansas & Oklahoma; Arthur E. Stilwell, of Kansas City, president of the Kansas City, Mexico & Orient Railway; E. L. Peckham, of Enid, O. T., general manager of the Denver, Enid & Gulf Railroad, and F. B. Johnson, a railroad contractor of St. Elmo, Ill.

Portsmouth, Va.—Reported that the Seaboard Air Line will build new terminal tracks at the mouth of the Hillsboro river

at Tampa, Fla. W. W. Gwathney is chief engineer.

Paducah, Ky.—The Kentucky & Ohio River Interurban Railroad Co. has filed incorporation papers, capital \$250,000. The incorporators are J. J. Freundlich, C. E. Whitesides, O. B. Williams, Paducah; O. B. Petteet, Wabash, Ind.; L. B. Whitesides, Franklin, Ind., and C. T. Crump, Columbus, Ind.

Salsbury, Md.—A bill has been introduced in the Maryland Legislature to incorporate the Somerset & Wicomico Light, Power & Railway Co., to build a line from Salsbury to Princess Anne and Crisfield, about 30 miles, with branches. The incorporators are Marion L. Brewington, of Salsbury; S. Frank Dashiel, Lorrie C. Quinn, Lloyd Riggan, Joshua W. Miles, of Princess Anne; Clarence P. Lankford, James H. Cullen, H. Fillmore Lankford and A. Webster Ewell.

San Antonio, Tex.—Mr. M. D. Monserrate, vice-president and general manager San Antonio & Aransas Pass Railway, writes the Manufacturers' Record, saying that there is no foundation in fact for the report that the company would build an extension to Monterey, Mex.

San Antonio, Tex.—Mr. M. D. Monserrate, vice-president and general manager, writes the Manufacturers' Record saying that it has not yet been decided who will do the grading for the line to Hidalgo.

Savannah, Ga.—Reported that the Central of Georgia Railway will build a line from Greenville to Newnan, Ga., about 25 miles. H. M. Steele is chief engineer.

Staunton, Va.—The Tidewater Railway Co. has been chartered to build a line from the West Virginia coal fields through the southern counties of Virginia to a port at the mouth of the James river. Headquarters in Staunton. President, T. D. Ranson; vice-president, W. H. Landes; secretary, J. B. Ranson; treasurer, H. A. Walker. Others interested are Arista Hoge, L. W. H. Peyton and Charles M. East. Survey begun in Giles, Montgomery and Roanoke counties. The line will be about 325 miles long.

Shawnee, O. T.—Reported that the Johnson Co. has been awarded the contract to extend the Ozark & Cherokee Central Railway (Frisco System) from Okmulgee, I. T., to Shawnee.

St. Louis, Mo.—The Missouri, Kansas & Texas Railway will, it is reported, build a branch to Wilburton, I. T., right of way having been granted.

Washington, D. C.—Reported that the Southern Railway Co. will make a survey for the projected extension of the Itta Bena Branch from Webb, Miss., to Memphis, Tenn. W. H. Wells is engineer of construction.

Waynesville, N. C.—The Waynesville Furniture Co. will, it is reported, build a dummy line from Canton to timber lands on the Pigeon river, about 15 miles.

Winnfield, La.—Concerning the report that the Louisiana & Arkansas Railway might build an extension from Jena, La., to connect with the Natchez, Red River & Texas Railroad, Mr. G. Knobel, chief engineer, writes the Manufacturers' Record that as far as he is aware the company does not intend to extend its line from Jena to Natchez at present.

Street Railways.

El Reno, Okla.—E. F. Mitchell, of El Reno, is reported to be arranging with Eastern capitalists to build an electric railway in Lawton, O. T., and from there to Fort Sill.

Fort Worth, Tex.—The Fort Worth & Rosen Heights Street Railway Co. has been incorporated by Sam Rosen and R. W. Flournoy, of Fort Worth; I. Gordon, H. A. Perlstein and J. S. Gordon, of Beaumont.

Greenville, S. C.—The Greenville Traction Co. proposes to build an extension. Work will begin in about a month. James H. Dawes is general manager.

Johnson City, Tenn.—The Johnson City Traction Co. is reported to have ordered rails to complete its line.

Louisville, Ky.—The Henderson City Railway Co. has been incorporated at Henderson, Ky., by H. W. Richardson and J. E. Bohannon, of Louisville, and A. L. Rich, of Cincinnati. The plan, it is said, is to take over the present street railway system and extend and otherwise improve it.

Louisville, Ky.—The Louisville Railway Co. has purchased the franchise for rights of way from Johnson and Main streets along Main street to Mellwood street and along the latter to the city limits, from which point the line will be extended to connect with a road leading to the Country Club.

Memphis, Tenn.—The City Street Railway Co. has been granted conditionally a franchise to build its proposed line.

Mining Plant.—George Barton, Dulzias, Orizaba, has purchased mining properties which he will develop, erecting a complete modern mining and milling plant.

New Orleans, La.—Captain A. M. Halliday, president of the Union Ferry Co., is reported to have purchased for A. M. McCormick the franchise for the proposed electric street railway between the Jefferson-Orleans Parish Line and the Texas & Pacific Railway station in Gretna.

Norfolk, Va.—Mr. R. I. Mason, receiver for the Hampton Roads Electric Railway, will, it is reported, apply for permission to issue \$150,000 of receiver's certificates to complete the road.

Walnut Ridge, Ark.—Construction of the Walnut Ridge & Hoxie Electric Railway is reported begun. S. C. Dowell and Mayor H. L. Ponder and others are interested.

Water-Power Electrical Plants.—The State of Oaxaca has had complete investigations made of the possibilities of water-power developments for manufacturing industries, with a view of encouraging investments in water-power electrical plants. Parties seeking information regarding the opportunities for investment are notified to address Senor Lic. Don Emilio Pimentel, Governor of Oaxaca, City of Oaxaca.

MACHINERY PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted:

Bank Fixtures.—People's Bank, Lewisburg, Tenn., will want new bank fixtures, including new vault front.

Boiler.—Apex Equipment Co., No. 11 Broadway, New York, N. Y., is in market for locomotive type, portable boiler, mounted on wheels, from 40 to 50 horse-power, second-hand. Give complete specifications, stating name of maker, age, steam pressure to carry, etc.

Boilers—Rennous, Kleinle & Co., Hazards' Hall, 111 Franklin street, Baltimore, Md., wants prices on two 100-horse-power boilers. See Engine.

Boiler.—See Mining Equipment.

Boiler.—See Mining Equipment.

Boiler.—See Engine.

Boiler.—Anthracite Machinery Co., Allentown, Pa., wants to buy one each 20 or 25 and 70 or 80 H.-P. locomotive boiler, 100 lbs. steam, on skids; 15,000 ft. 1 $\frac{1}{2}$ up to 2 $\frac{1}{2}$ inches inclusive wire cable, second-hand; 5 hoisters, 25 to 50 H.-P.; two 40 to 50 H.-P. Corliss engines; 5 25 to 50 H.-P. horizontal, slide-valve engines, old style preferred; 5 pumps, not less than 5-inch suction and 4-inch discharge, single, high pressure.

Boilers—See Wood-working Machinery.

Boilers—See Oil Mill.

Boilers—See Starch-making Machinery.

Building Material.—Ocmulgee Brick Co., Macon, Ga., wants prices on corrugated iron in carlots.

Building Material.—J. A. Kelly, Dublin, Ga., wants bids on sheet-metal work and slate roofing.

Building Materials.—See "Electric Wiring," etc.

Building Materials.—Mississippi Orphans' Home, Rev. W. T. Griffin, manager, Water Valley, Miss., wants bids on brick and other building materials and steam-heating plant.

Building Material.—R. O. Evans Co., Owensboro, Ky., wants addresses of manufacturers of metal sash.

Building Materials.—People's Bank,

Lewisburg, Tenn., will want building materials, such as pine flooring, ceiling, windows, doors, etc.

Can Machinery.—See Oyster-bucket Machinery.

Cannery Machinery.—E. C. Robinson, Immigration Department, Houston, Tex.,

wants prices on equipments for canning factories.

Cast-Iron Pipe and Specials.—Henry B. F. Macfarland, Henry L. West and John Bidle, commissioners, Washington, D. C., will open bids March 10 for furnishing cast-iron pipe and specials for siphons. Forms, specifications and necessary information may be obtained at office of commissioners.

Corrugated Iron.—See "Building Material."

Cotton Machinery.—M. C. Winston, Selma, N. C., will be prepared to receive estimates on cost of constructing and equipping a 5000-spindle cotton mill.

Drilling Machinery.—Oklahoma & Pennsylvania Oil, Gas & Mineral Co., Meeker, O. T., wants bids on drilling machinery.

Dump Buckets.—See "Pipe."

Electric Fixtures.—I. F. Ridinger, 223 St. Paul street, Baltimore, Md., will want bids on electric-lighting fixtures.

Electric-light Plant.—Jos. P. Van Derhaar, Box 861, Clanton, Ala., wants addresses of manufacturers of electric-lighting machinery.

Electric-light Plant.—C. H. Kretz, Baton Rouge, La., wants bids on electric-light plant of 120 kilowatts, 220 volts and three units.

Electrical Machinery.—See Water Wheels, etc.

Electrical Machinery.—Rennous, Kleinle & Co., Hazards' Hall, 111 Franklin street, Baltimore, Md., wants prices on 50-kilowatt dynamo and equipment. See Boilers. See Engine. See Machine Tools.

Electric Motor.—F. Arnold & Sons, 230 Park avenue, Baltimore, Md., will buy five horse-power electric motor.

Electric Wiring, etc.—Henry S. Rippel, 7 Clay street, Baltimore, Md., will take bids on electric wiring and fixtures for office building.

Elevator.—Neudecker Tobacco Co., 20 South Howard street, Baltimore, Md., will take bids on furnishing equipment and installing complete, ready for operation, a 6x6 hydraulic elevator, to run 50 feet. This is to be installed in building just contracted for.

Engine.—See Mining Equipment.

Engine—Fitts.—Crabtree Mfg. Co., Sanford, N. C., wants 12x30 second-hand Corliss engine; state price, make and how long used.

Engine.—Lewisburg Mill & Elevator Co., Lewisburg, Tenn., is in market for 75 to 100 H.-P. Corliss engine, second-hand.

Engine.—Rennous, Kleinle & Co., Hazards' Hall, 111 Franklin street, Baltimore, Md., wants prices on 100-horse-power high-speed engine. See Boilers.

Engine.—W. E. Vance, Montezuma, Ga., wants bids on 10 H.-P. gasoline engine.

Engine.—See Mining Equipment.

Engine.—King Bros., 305 East Pleasant street, Baltimore, Md., will buy six horse-power gas engine; new or first class, second hand. See Printing Equipment.

Engines.—See Wood-working Machinery.

Engines.—See Boiler.

Engine.—Ida Rice Mill, Rayne, La., will want April 1 bids on second-hand Corliss engine, with fly-wheel for rope-drive from 150 to 200 H.-P. and one 200 H.-P. boiler. Will want 100 feet stack.

Engines.—See "Railway Equipment."

Engines.—See Starch-making Machinery.

Engines.—See Oil Mill.

Excelsior Machinery.—J. W. Cregar Agency, The Bourse, Philadelphia, Pa., wants prices on excelsior machinery; will place order for 15 machines.

Exhaust Apparatus.—Rhode Island Co. Spray, N. C., is in market for galvanized pipe 12-inch and suction fan for conveying raw cotton.

Fire Department Equipment.—J. G. Palmer, Mayor, Opelika, Ala., wants bids on complete fire department equipment.

Fire Department Equipment.—Bids will be received until March 8 for purchase of steam fire engine, No. 3 size, both rotary and piston, for city of Charlottesville, Va. Usual rights reserved. G. E. Walker, secretary of committee.

Fire Department Equipment.—Emmett Deans, Chairman of Fire Committee, Portsmouth, Va., will open bids March 14 for supplying city one fire engine and two combination wagons. Usual rights reserved.

Fire-protection Equipment.—Tomlinson Chair Manufacturing Co., High Point, N. C., wants to correspond with parties installing sprinkling service in warehouses.

Flour Mill Machinery.—J. W. Maddox & Bro., Hoschton, Ga., wants machinery for

25-barrel flour mill, to be operated by water-power.

Flour-mill Machinery.—B. F. McGrew, Pulaski, Tenn., wants to correspond with manufacturers of flour-mill machinery.

Handle Machinery.—See "Wood-working Machinery."

Hardware Manufacturers.—James E. Gibbs, Bridgewater, Va., wants to correspond with manufacturers of hardware relative to having a patent sash fastener manufactured.

Heating Apparatus.—See Building Materials.

Heating Apparatus.—Henry S. Rippel, 7 Clay street, Baltimore, Md., will take bids on steam heating apparatus for office building.

Heating Apparatus.—I. F. Ridlinger, 223 St. Paul street, Baltimore, Md., will want bids on installation of steam-heating plant for office building.

Ice Machinery.—L. A. Howell, New Roads, La., wants to correspond with manufacturers of ice machinery.

Iron-working Machinery.—"Gracechurch," care of Manufacturers' Record, wants to obtain prices on machinery for manufacturing wrought iron pulleys.

Kaolin Machinery.—R. F. Jarrett, Dillsboro, N. C., wants estimates on machinery for manufacture of kaolin.

Ladders.—B. J. Cowart, Double Springs, Ala., wants to purchase two rolling ladders for storehouse, suitable to adjust for ceiling 12 feet high.

Laundry Equipment.—L. A. Howell, New Roads, La., wants to correspond with manufacturers of steam-laundry equipment.

Lead.—Board of Awards, Baltimore, Md., will receive proposals until March 2 for furnishing and delivering to the water department, at its Guy street yard, 30 tons (2240 lbs. per ton) of Omaha pig lead. Specifications for lead to be furnished may be obtained by applying to Alfred M. Quick, Water Engineer, City Hall, Baltimore, Md. Proposals must be accompanied by certified check for one-tenth of the amount of bid. Bond required and usual rights reserved.

Lighting and Heating System.—Proposals for erection of heating and lighting plant and for installing heating, lighting, ventilating and plumbing systems in new cell building of the Penitentiary will be received until March 8, by Penitentiary Building Committee, Richmond, Va.

Machine Tool—Strickland Machine Co., 2230-32 East Main street, Richmond, Va., wants to purchase second-hand screw-cutting lathe—34" or 36" swing.

Machine Tools.—See Surgical Instrument Machinery.

Machine Tools.—John G. Duncan Co., P. O. Box 543, Knoxville, Tenn., wants dealers' prices on one 24x12 to 10-foot bediron lathe, one 24 to 32 drill press, one 20 to 24 shaper, and one five-foot planer, all second-hand.

Machine Tools—Asheboro Wheelbarrow Co., Asheboro, N. C., will buy combined punch and shear with power to punch and cut 3/8 to 1½-inch steel tire and to cut ½-inch rod iron.

Machine Tools.—J. F. W. Dorman Co., 216 East Lexington street, Baltimore, Md., wants prices on lathes, drills, drop hammers, milling machines, routing machines, etc., will not be ready to receive machinery for about four weeks.

Machine Tools.—Rennous, Kleinie & Co., Hazards' Hall, 111 Franklin street, Baltimore, Md., wants prices on three lathes, one planer, one small drilling machine and one emery wheel for grinding tools, etc. See Engine. See Boiler. See Electrical Machinery.

Mining Equipment.—Mrs. L. J. Lesley, Abbeville, S. C., wants to correspond with parties having facilities for developing clay lands.

Mining Equipment.—H. M. White, Dillsburg, Va., is in market for complete mining outfit, including boiler, air compressor, drills, hoisting engine and cable; second-hand.

Mining Equipment.—Naco Gold Mining Co., G. W. Patriek, general manager, Oklahoma City, O. T., wants bids on three-stamp mill, amalgam and concentrating tables, boiler and steam engine.

Milling Equipment.—Eureka Anthracite Coal Co., C. L. Pye, secretary and general manager, Clarksville, Ark., desires to open negotiations with contractors to erect modern breaker building, including installation of complete machinery for breaking and screening coal into large bins.

Oil Mill.—A. J. Gillen, Maxey, Ga., will want complete outfit for cottonseed oil mill

of 40 tons capacity, including boilers, engines, etc.

Oyster Bucket Factory.—P. B. Hand, Ocean Springs, Miss., wants complete equipment for manufacture of oyster buckets.

Paper Cutter.—See Printing Plant.

Pearl Button Machinery.—R. B. Fothergill, 713 Cherry street, Chattanooga, Tenn., wants prices on pearl button machinery.

Pipe.—See Exhaust Apparatus.

Pipe.—See Planing Mill Equipment.

Pipe.—Harper Machinery Co., Park Row Building, New York, N. Y., wants to get six dump buckets and one mile of 6" or 8" pipe.

Pipe.—Marvin McDonald, engineer, Ozark, Ala., is in market for 4-inch cast-iron water pipe, sewer pipe, etc.

Pipe-cutting Machinery.—Acme Brewing Co., Macon, Ga., wants second-hand pipe-cutting and threading machine, to take from one or one-half to six inches; must be in good condition.

Planing Mill.—See Wood-working Machinery.

Planing Mill Equipment.—L. M. Brown, West Union, S. C., wants second-hand galvanized water tank to hold about 2500 gallons; 3000 feet water pipe and one second-hand water ram exhaust fan for planing mill.

Plumbing, etc.—See item about Henry S. Rippel, under Building Notes at Baltimore, Md.

Printing Equipment.—King Bros., 305 East Pleasant street, Baltimore, Md., will buy 32x46 cylinder press, pony press, platen presses, 13x19, 8x12 and 10x15; six horse-power gas engine, paper cutter, shafting, pulleys, etc. New or first class second-hand.

Pulley Machinery.—See Iron-working Machinery.

Pulleys, Etc.—King Bros., 305 East Pleasant street, Baltimore, Md., will buy shafting, pulleys, etc., for printing plant; new or first-class second-hand. See Printing Equipment.

Pumps.—See Boiler.

Pumps.—See Starch-making Machinery.

Quilting Machinery.—Patton Manufacturing Co., Jackson, Tenn., wants full information regarding manufacture of comforts and quilts, and prices on machinery.

Pumps.—Implement & Supply Co., W. R. Soal, secretary-treasurer, Statesville, N. C., wants pumps and windmills.

Rag Cleaning Machinery.—L. E. Kennedy & Co., 17 Broadway, New York, N. Y., wants to buy machinery, new or second-hand, for cleaning rags and heavy cloth; dry process preferred.

Railway Equipment.—Charles Brinn, Swan Quarter, N. C., wants prices on second-hand railway equipment, including light-weight iron.

Refrigerating Machinery.—H. C. Field, Southern Chair Co., High Point, N. C., desires correspondence with regard to cold air refrigerating.

Railroad Construction.—Sealed proposals will be received until March 10, at office of W. H. Bower, general manager, Elkins, W. Va., for graduation and masonry, unclassified, on about 30 miles of single track railroad between Frenchtown, W. Va., and the mouth of Copen Run, Braxton county, W. Va. Plans and profile can be seen at the General Office, Elkins, W. Va., or at office of A. A. Chapman, Engineer, Weston, W. Va. Usual rights reserved. Henry G. Davis, president, Coal & Coke Railway Co.

Railway Equipment.—See Saw Mill Equipment.

Railway Equipment.—A. V. Kaiser & Co., 222 South Third street, Philadelphia, Pa., is in market for 200 to 300 coal hopper cars, 30,000 to 10,000 pounds capacity, steel bodies preferred, standard gauge.

Railway Equipment.—R. F. Jarrett, Dillsboro, N. C., will want about 15 miles of second-hand T-rail 20 to 30 lbs.; also wants estimates on one or more 7-ton engines.

Reels.—Rhode Island Co., Spray, N. C., is in market for second-hand reels, 34-inch Swift preferred.

Saw Mill.—See Wood-working Machinery.

Saw Mill.—International Farm Agency, J. Coles Clark, manager, 215 Eighth street, Lynchburg, Va., wants prices on new and second-hand saw mill outfits.

Saw Mill.—Clem. F. Ritter, High Falls, N. C., wants band saw 24 or 30-inch wheels.

Saw Mill Equipment.—Samuel Carnes, Vienna, Ga., is in market for heavy gang edger, automatic saw guummer, 20 to 22

logging locomotive and second-hand saw mill machinery; also carts, harness, mules, etc.

Sewerage.—Shreveport Water Works Co., Shreveport, La., will open bids March 16 for constructing all parts of approximately six miles of sewers of eight and 10 inches in diameter. Plans and specifications may be seen and specifications, forms of contract, bond and bid obtained at office of W. S. Kuhn, general manager, 1200 Bank for Savings Building, Pittsburgh, Pa., or at office of Shreveport Water Works Co. Certified check for \$500 must accompany each bid.

Sewing Machines.—See "Quilting Machinery."

Starch-making Machinery.—Gulf States Refining Co., Lake City, Fla., wants bids on engines and boilers, 250 horse-power; pumps, 500,000 gallons capacity; starch-making machinery, grinders, shakers, dryers, conveyors, etc.

Shingles.—J. M. Hopper, Leaksville, N. C., wants prices on No. 2 pine shingles.

Surgical-Instrument Machinery.—F. Arnold & Sons, 230 Park avenue, Baltimore, Md., will buy 8-inch lathe, polishing machine, polishing wheels, emery grinder, small drill press, bench tools, five horse-power electric motor, etc., for surgical instrument factory.

Tank.—See Planing Mill Equipment.

Telephone Materials.—Canton Telephone Co., J. W. Jarvis, manager, Canton, Ga., wants bids on telephone material, especially wire rope.

Telephone Supplies.—W. J. Turner, Washington, Va., is in market for telephone supplies suitable for rural lines.

Textile Machinery.—See "Quilting Machinery."

Water Wheels, Etc.—Lily Mill & Power Co., Shelby, N. C., will purchase water wheels and electrical drive at an early date.

Water Works.—City of Hickory, N. C., has postponed until March 15 the opening of bids for the construction of its water works, reported in this column last week. The sum of \$60,000 is available for the work. Plans and specifications can be seen at offices of Committee on Water Works, Hickory, N. C., and of O. Perry Sarle and Edw. W. Shedd, engineers, 146 Westminster street, Providence, R. I.

Water Works Construction.—Sealed proposals, in triplicate, will be received for construction of water works in Lawton on March 28, in Anadarko on March 29 and in Hobart on March 30. Bids should be addressed to Engineer United States Geological Survey at each of above cities. Forms of proposal and particulars may be obtained on application to Engineer of United States Geological Survey at Lawton, O. T., and the City Clerks of Lawton, O. T., and Hobart, O. T., at whose offices plans may be inspected.

Windmills.—See Pumps.

Wood-working Machinery.—W. R. Young, Crystal Springs, Miss., wants to correspond with manufacturers of boilers, engines, saw mills, planing mill machinery, shingle and heading machinery.

Wood-working Machinery.—J. G. Ingram, Lineville, Ala., is in market for wood mauling machine.

Wood-working Machinery.—C. J. O'Farrell, 119 East Georgia avenue, Atlanta, Ga., wants to correspond with manufacturers of machinery for making chairs and tables.

Wood-working Machinery.—Randolph & Hawthorne, Charlottesville, Va., wants prices on lathes, etc., for manufacture of spoke, rim and handles.

Wood-working Machinery.—J. P. Smith, Box 611, Dublin, Ga., is in market for machinery to make wooden wheelbarrows, including body bender, boring machine to bore five holes at once, band saw and planer.

Wool.—Spray Woolen Mills, Spray, N. C., is in market for wool in small and large lots.

Woolen Machinery.—H. D. Egerton, Ingleside, N. C., wants to correspond with manufacturers of woolen machinery relative to purchase of equipment for mill.

MEXICO.

Bridge.—City Government of Parral, Chi., and Parral capitalists are maturing plans for construction of bridge to connect and suburb. Address The Alcalde.

Carriage Factory.—Fred Ronstadt, of Tucson, Arizona, contemplates establishing carriage factory in Mexico City.

Dairy.—Thomas B. Finsbury, Bonham, Tex., contemplates establishing large milk and butter dairy in Mexico City.

Harbor.—It is reported that the State of Yucatan will arrange for construction of harbor at Xcalak. Address Senor Don Olegario Molina, Merida, Yucatan.

Electric-light Plant.—City Government of Mazatlan has announced that all bids for establishment of an electric-light plant must be submitted not later than March 31. Address The Alcalde of Mazatlan City.

Electric-light Plant.—J. & F. Borde, of Tampico, have secured municipal contract to furnish electric lighting; plant has not been erected.

Electric Plant.—Senor Ignacio de la Torre y Mier, Cuautla, Morelos, has concession to take 3500 liters of water per second from Cuautla river for the purpose of developing the power and erecting electric plant to transmit same.

Electric Plant.—Theodore V. Peeborn, Cordoba, Vera Cruz, has concession for 40,000 liters per second to develop water power for transmission by electricity for lighting and power purposes.

Electric-light Plant.—The state of San Luis Potosi has called for bids for establishment of electric-light plant in the capital city, San Luis Potosi. Address Senor Ingenuero, Don Blas Escontria.

Electric-light Plant.—Rev. Archbishop Gillow, City of Puebla, will install electric-light plant, to be operated by water power.

Electric Railway.—The State Government of Michoacan has granted a concession for the construction of a street railroad from Sahayo and Palma to Jiquilpan. Address Senor Don Aristeo Mercado, Morelia, Michoacan.

Electric Railway.—An official of the Hidalgo Railroad, which connects Mexico City with the great mining town of Pachuca, is authority for the statement that his company intends to purchase the animal traction street-car system of Pachuca and transform it to an electric system. The sum of \$250,000 has been fixed as the price for the present equipment. Address Ing. Antonio Caso, Cordobanes 5, Mexico City, D. F. Mexico.

Irrigation System.—Col. Fernandez Gonzales, Chilpaunglo, Guerrero, has a concession to utilize the waters of Amacusac river for irrigation purposes.

Mining Plant.—La Union Mineral Mining Co., Sonora, Son., will arrange for enlarging operations on its mineral properties.

Mining Plant.—A. J. Peyton & Co., American capitalists, will install additional machinery (including 60 horse-power boiler, air compressors, etc.) to facilitate developments at their mines. Address General Manager of Santa Emilia Mines, Coapa, Michoacan.

Mining Operations.—E. M. Parish, of Parral, Chi., and Fred Howard, of Chicago, Ill., have purchased, at \$400,000, extensive mining properties, which will be developed, \$25,000 to be expended during the first year. Address John R. Harbottle, general manager of Guazapares Mining & Milling Co., Western Chihuahua.

Mining Plant.—Aguascalientes Mining Co. will order a large lot of additional machinery for its mining operations. Address at Aguascalientes, Mexico.

Oil Well Developments.—S. Pearson & Son, of Vera Cruz, V. C., can give information regarding proposed extensive developments in oil fields.

Silk Mills.—An American company has obtained concession to build silk mills in the State of Jalisco. Address Senor Coronel Don Miguel Ahumada, Guadalajara, Jal.

Smelter.—National Metallurgical Co., San Luis Potosi, S. L. P., will issue \$500,000 bonds for erection of customs smelting plant, with daily capacity of 300 tons. Plans have been approved.

Steamboat Line.—A company is being organized to operate at least ten modern steamboats on Lake Chapala. Address Board of Banco Central, Guadalajara, Jal.

Steam Railroad.—It is reported that a company has been formed by capitalists of Tlacotalpan, Vera Cruz, to construct a railroad from La Tuxtlas to Salta Barranca. Address Chazaro & Co., Tlacotalpan, Vera Cruz.

Sugar Mill.—Motzorongo Plantation Co., Cordoba, V. C., is prepared to let contracts for sugar mill; will also need coffee plantation and mill machinery.

Sugar Mill.—Charles E. Seiler, Madison, Wisconsin, has stated that a company in which he is interested will build sugar mill to cost \$200,000, on the Isthmus of Tehuantepec.

Water Power.—Charles Conant, Hermosillo, Sonora, has concession to utilize 20,

000 liters of water per second from Yaqui river.

Water Power.—Compania Hidro Electrica, Queretaro, Que., has concession for 2000 litres of water per second for power purposes.

Water Works and Sewerage.—Mackin & Dillon, Monterey, N. L., have secured contracts to build water works and construct sewerage system for the city of Monterey. It is estimated that the work will cost \$2,000,000.

Railways.

Electric Railway.—Rudolph Weiser, a New York engineering expert, is now in the city of Guadalajara for the purpose of preparing estimates on the construction of the proposed line from that city to Lake Chapala. The necessary concessions have been obtained, and work will soon be commenced.

Electric Railway.—The question of cost of construction of the new electric street car system for the city of Pueblo has been satisfactorily solved, and the work, it is expected, will be commenced at as early a date as practicable. General Manager F. E. Barnard, F. C., Urbano, Pueblo, can furnish information.

Tramways.—The State Government of Jalisco has granted concession for the construction of tramway lines from P. Diaz Park to the Oblatos Railroad Station and another from San Manuel street to the School of Arts and Trades in the City of Guadalajara. Address Senor Coronel Don Miguel Ahumada, governor of the State.

Tramway.—Buenaventura T. Ramirez has obtained from the Government of Michoacan a concession for the construction of a tramway line from La Palma to Salinay. He may be addressed at Morelia, Michoacan, Mexico.

Electric Railway.—It has been decided to construct an electric railroad from the city of Morelia to Guadalajara. Archbishop Silva, of Morelia, is interested. Engineer Carlos F. de Sander, of Morelia, has been appointed to obtain the usual government concessions.

Steam Railroad.—Wenceslao Garcia, of Oaxaca, has just been granted a concession from the government for the construction of a railway and its operation for a period of ninety years from the City of Oaxaca, capital of the State of that name, to Tlacolula, with a branch line to Tlalixtac. The concession also includes telegraph or telephone construction along same route. Surveys will begin immediately. Just as soon as the plans are approved by the Department of Communications construction work must commence. Free importation of construction material and rolling stock is allowed for a term of five years, the agreement being that within three years the road must be completed. By the construction of this road the famous Mitla ruins, 30 miles east of the City of Oaxaca, will be

made easy of access. Gauge of the road three feet. Address Wenceslao Garcia, Oaxaca City, Oaxaca, Mexico.

Steam Railroad.—Gov. Ahumada, of Jalisco, has just issued a decree approving the contract entered into by the executive of the State and Telesforo Ruiz for the construction of a railroad from the banks of the Rio Grande to the station of the Mexican Central Railway, near La Barca, through which city the new road will pass.

Steam Railroad.—Engineer L. G. Hock, of Kansas City, is now in Mexico as representative of the company for the purpose of ascertaining the cost of constructing a railroad connecting San Cristobal, State of Chiapas, with Quazaltenango, capital of the Republic of Guatemala. Application has been made to the Mexican Government for a concession.

Steam Railroad.—Carlos H. Johnson, of San Marcial, Sonora, a heavy stockholder and general manager of the extensive coal mines in San Marcial district, says a railroad will in the near future connect his mines with the port of Guaymas, Sonora, a distance of 60 miles.

Steam Railroad.—A railroad is projected to connect a portion of the tropical lands of the State of Tabasco with the capital of that State, San Juan Batista, the distance being 129 kilometers. Engineer Jose Tambour, of the latter city, can furnish needed information.

Steam Railroad.—The International Railroad Company is preparing to extend its line to the Pacific Coast port of Mazatlan. Surveys for the new route are being made, and when completed the work on the Durango-Mazatlan extension will begin. Address President J. G. Metcalf of the International Railroad, Durango, Mexico.

Steam Railroad.—The Compania Carbonifera de Monterrey has decided to build a railroad from Villa Musquiz, where the coal mines of the company are situated, to a point on the Mexican International. The principal office of the company is in Monterrey.

Steam Railroad.—The Agricultural and Industrial Co. of the City of Mexico is about to build a railroad from San Blas, in the State of Jalisco, east to Tepic, 30 miles. J. R. Wahl, Mexico City, is interested.

Steam Railroad.—A concession has been granted to the San Gregorio Mining Co. to extend its line to Gonzales, on the National Railroad of Mexico, 11 miles. Address San Gregorio Mining Co., Marfil, Guanajuato.

Street Railway.—The Coahuila State Government has granted a concession to a company formed by Mexicans and Americans for the construction of a street car system which will probably be operated by electricity. The new road will connect Saltillo with the neighboring town of Villa de Orteaga. Address Senor Don Miguel Cardenas, Saltillo, Coahuila.

importation before the recent advance in price.

A Manufacturing Opportunity.

An energetic man desirous of obtaining the controlling interest in a manufacturing business can address B. T., care the Manufacturers' Record, for particulars regarding an opening in a cedar slat factory.

Clay Lands For Sale.

Manufacturers looking for clay lands may be interested to know that a tract of thirty-five acres is offered for sale by Messrs. E. M. & J. T. Brennan, of Robinson, Md. The land is on the Severn river, insuring low freight rates to Baltimore, and the clay is suitable for making all kinds of brick.

Kinkade & Liggett Co.'s Change.

The Kinkade & Liggett Co., of Columbus, Ohio, manufacturers of passenger and freight elevators, has changed its title to the American Elevator Co., and organized, with Joseph Schonthal, president and general manager; Geo. M. McPeek, secretary-treasurer; W. K. Liggett, engineer, and J. H. Holland, superintendent. Branch offices will be continued at Pittsburgh, Philadelphia, Buffalo, Cleveland, Indianapolis and Atlanta.

A Manufacturing Investment.

In order to provide funds for equipping a new plant, the Southern Machine Manufacturing Co., of Richmond, Va., will issue \$100,000 of preferred stock. The company's present works is taxed to its utmost capacity and increased facilities are necessary. The stock mentioned is now being offered to investors. It is to be issued as six per cent. non-cumulative, and is guaranteed by the American Guaranty Co.

Messrs. W. H. Coverdale & Co.

An organization including engineers of experience in the design and construction of steam and electric railways, lighting and power plants, coal and ore handling machinery, etc., is Messrs. W. H. Coverdale & Co., recently formed. Mr. Coverdale was for many years in the engineering department of the Pennsylvania lines west of Pittsburgh, and was track elevation engineer of that company in Chicago during 1898-'99. He was prominently identified with constructing the Westinghouse shops at Pittsburgh, and for the past three years has been civil engineer for a New York firm. W. H. Coverdale & Co. have located offices at 66 Broadway, New York.

Chattanooga Paint Co.

A Southern-made product that has been a great success in the markets is that of the Chattanooga (Tenn.) Paint Co. Having an extensive plant, the company has taken care to keep its paints always of the best grade, so that dealers and users find the quality uniform at all times. During 1903 the company handled a large volume of trade, and has many large orders on file now, with additional inquiries being received daily. The company has steadily enlarged its manufacturing plant, recently having completed an additional building, 30x75 feet in size, which will serve its purposes for a while.

New Brick Truck.

Operators of brick manufacturing plants will doubtless be interested in the announcement that an improved brick truck has been invented. The invention provides a truck for transferring the loaded pallets from the brick machine to the drying sheds and to the kiln, and the device is said to be readily manipulated for elevating the loaded pallets from or lowering them to the pallet supporting rails or frame. W. Lee Harbin, of Lexington, N. C., has patented the device, and can furnish further details to those who may want to know them. He claims that with the truck one man can carry five hundred bricks at a time.

Southern Car and Foundry Plant.

As the receivers of the Southern Car & Foundry Co. are now finishing contracts and using up the materials on hand they are arranging to dispose of the several plants. These plants are located at Memphis, Lenoir City and Gadsden, and any one of them is adapted to the manufacture of articles in iron and wood that can be produced with the facilities required for the construction of freight cars. The three plants have both iron and woodworking equipments, both the Gadsden and Memphis plants having foundries, the Memphis plant both a wheel foundry and a grey iron foundry. Address Messrs. T. G. Bush

and T. A. Gillespie, receivers, Anniston, Ala.

Machine and Architectural Patterns.

The Richmond Pattern Works, manufacturers of machine and architectural patterns of every description, 305-7-9-11-13 N. 18th street, Richmond, Va., reports business as very encouraging. This company has added to its pattern business a foundry at Basic City, Va., and is in a position to make castings up to 10 tons. It is now making a 7-ton casting for a corrugated roller for the James E. Wilson Mfg. Co., Norfolk, Va. In the pattern department the company has turned out some very large patterns, and claims to be better equipped for that work than any other shop of its kind south of New York.

Messrs. J. B. McClary & Co.

The demand for machinery and supplies of all kinds in the Birmingham district is creating much active business for the manufacturers' agents and supplies established in that territory. One of the new firms is Messrs. J. B. McClary & Co., offices in the First National Bank Building, Birmingham, Ala. They find trade conditions very promising. Mr. McClary is thoroughly conversant with the needs of electric railways and other industrial enterprises, and is of great assistance to buyers in selecting the best equipments for their purposes. McClary & Co. represent Marvin Rock Drill Co., Binghamton, N. Y.; Van Dorn-Elliott Electric Co., Cleveland, Ohio; N. A. Christensen, air compressors, Milwaukee; Lumen Bearing Co., Buffalo; Van Dorn & Dutton, Cleveland; Portsmouth (Ohio) Pressed Steel Co.; Wier Frog Co., Cincinnati; Federal Mfg. Co. (trolley poles), Cleveland; E. W. Bliss Co., gears and pinions, Brooklyn, and others.

A New Feature Engine.

The Brownell Co., of Dayton, Ohio, manufacturers of steam boilers and engines, has on the market an engine which is well adapted to power plants where there is an abundance of dust and dirt.

The crosshead being circular to fit bored guides, readily adjusts itself to the wrist pin, and must remain so. It is fitted with adjustable shoes, both on bottom and top, making it the work of but a moment to bring it central with the guides. There is no disassembling of parts and no packing up with liners to make this adjustment, a fact that will be appreciated by all engineers who have had to adjust some of the other types. The piston rod is screwed into crosshead and locked with a nut.

The crosshead, being of the hollow pattern, does not require an oil cup on the side, and when furnished for dusty places and it is specially ordered, the engine is provided with a sheet-iron shield over the crosshead and guides, which makes that part of the engine practically dust proof. This is worth investigation by prospective purchasers.

The company also manufactures steam boilers and heaters as well as automatic engines for belted and direct connecting, and solicits correspondence in reference to complete power plants.

Allis-Chalmers Co. Widens Scope.

An important announcement is being made by the Allis-Chalmers Co., general offices in Chicago. It includes particulars regarding the company's entrance into the field, not only of prime-movers, in which it has always been one of the most prominent, but also with steam turbines, gas engines and hydraulics. And, with electrical apparatus combined with any one of these prime-movers, the company is prepared to estimate upon and accept contracts for complete plants of every description. As regards turbines, the company has become a part of the Steam Turbine Advisory syndicate of England, composed of Yarrow Shipbuilding Co., Tweedie (Vulcan) Shipbuilding Co., Willans & Robinson, engineers and engine builders; Mr. Fullager, formerly chief engineer of Parsons Steam Turbine Co., and the Allis-Chalmers Co. The turbine is of horizontal type, in sizes 500, 750, 1000, 1500 and 5000 K.W., and if required can be built up to 10,000 K.W. The hydraulic machinery is the famous designs of Escher, Wyss & Co., of Zurich, Switzerland, several types of which have been installed in the Niagara Falls plant, aggregating 85,000 horse-power. The gas engines are the types of Nurnberg Machine Co., of Nurnberg, Germany, built from 250 to 1500 horse-power, many of the sizes being in operation. These engines are suitable for consumer gas or taking the waste from blast furnaces. They can be used for any

INDUSTRIAL NEWS OF INTEREST.

A Machine-shop Opportunity.

A skilled man with business qualifications for conducting a machine shop can be informed of an opportunity to invest in an established plant by addressing John T. Aschcraft, Florence, Ala.

A Business For Sale.

An established business, said to constitute one of the largest and best equipped plants south of Philadelphia, is offered for sale. For information address D 32, care the Manufacturers' Record.

Pittsburg Shear Knife & Machine Co.

The Pittsburg (Pa.) Shear Knife & Machine Co. announces that its name has been changed to the Heppenstall Forge & Knife Co., the management remaining the same. A continuance of orders is solicited from former patrons.

Factory Facilities at Baltimore.

Manufacturing facilities that include 35,000 square feet of floor space, steam and electrical-power plant, modern building, central location, etc., are on the market. For information address C 201, care the Manufacturers' Record.

Ice and Cold Storage Plant.

Investors likely to be interested in an ice and cold-storage plant proposition can address George J. Bergen, 428 Market street, Camden, N. J. He is in charge of the sale, to be held March 25, of a modern 70-ton plant, with all facilities, located at Atlantic City.

New Hollow Auger.

Something new in hollow augers has been devised by J. H. Scalf, of Camilla, Ga., and the idea has been patented. Mr. Scalf desires to sell his rights. The new auger is said to be durable and convenient, and possible of manufacture at a cost of from 10 to 25 cents.

Western Telephone Mfg. Co.

Buyers of high-grade telephone apparatus are asked to note that the well-known manufacturer, the Western Telephone Mfg. Co., of Chicago, has secured better accommodations at 42 West Jackson Boulevard, the Atlantic Building, and will remove its offices and factory to that location on March 5.

Their Boston Representative.

Messrs. Patterson, Gottfried & Hunter, Limited, 146 Centre street, New York, have concluded an arrangement by which Messrs. Brown & Wales, of Boston, Mass., will act as their representative in that city. Brown & Wales will carry a large stock of Shaw patent compression couplings, Johnson safety shaft collars, B. & C. friction clutches, Robinson angle drives and National hangers.

Low Prices on Bolting Cloth.

Millers who need bolting cloth can purchase supplies at regular prices prevailing before April 1 by addressing the Wolf Co., Export Department, 523 North 23d street, Philadelphia. The company secured a large

purpose where power is needed. The Allis-Chalmers Co. has made its arrangements for handling and building the well-known machinery mentioned only after the most thorough investigation. Its generators, motors and other electrical apparatus will be manufactured for all purposes, this department to be in charge of John F. Kelley, formerly of the Stanley Electric Co.; William Stanley, of same company, will be consulting engineer; John H. Kelman, formerly Stanley superintendent, will be superintendent for Allis-Chalmers.

TRADE LITERATURE.

A Handy Booklet.

As a reminder to its friends and customers the Southern Coal & Coke Co., of Knoxville, Tenn., is issuing a handy memorandum booklet. This booklet fits the vest pocket, and its contents include some valuable facts to have ready for reference. A notable feature is the miniature maps of the United States, our Island possessions, Canada, Mexico and South America.

All About Slate.

An interesting booklet, which also contains some valuable facts regarding the various uses of slate, is "All About Slate." It is issued in order to present some timely facts about slate as a roofing and for other purposes, and will appeal strongly to contractors, builders, roofers and others. David McKenna, manufacturer and shipper of slate, offices at Slatington, Pa., issues the publication mentioned.

The Evidence in the Case.

An impressive collection of letters from brick manufacturers throughout the South is contained in a pamphlet issued under the title of "The Evidence in the Case." They are strongly in praise of the New South brick machinery made by Messrs. J. C. Steele & Sons, of Statesville, N. C. This firm has made a great success of its specialty, and all kinds of equipment and supplies for brick manufacturing plants.

Roof Satisfaction.

As the roof is one of the most exposed portions of the building, subject to the most severe conditions, it is important to pay due attention to the selection of the proper material. A guide to selection, for folks who want a satisfactory roof, is being issued in the form of a booklet, fully illustrated, entitled "Roof Satisfaction." For copies address the Cortright Metal Roofing Co., of Philadelphia, offices at 50 North 23d street.

Crandall Packings.

Crandall packings cover a most comprehensive line that for twenty years has been favorably known to dealers and users. They are manufactured by the Crandall Packing Co., now issuing its catalogue of steam, ammonia and hydraulic packings. The booklet gives all the necessary data for interested parties. The company's home offices and plant are at Palmyra, N. Y.; Chicago office at 30 La Salle street.

Steam Engines and Boilers.

A small book devoted to illustrations and partial specifications of several types and sizes of Atlas steam engines and boilers is now being distributed. It is an attractive publication, presenting main dimensions and nominal ratings, etc., to afford buyers the necessary facts for selecting the equipment they require. The Atlas Engine Works, of Indianapolis, builds the boilers and engines catalogued in the book.

Weinman Steam Pumps.

A general catalogue is being issued of the pumping machinery built by the Weinman Machine Works, of Columbus, Ohio. It presents in a concise manner such styles and sizes of pumps as the company build, and for which there is the greatest demand. Weinman pumps have been on the market for thirty years, and their efficiency, durability and simplicity has been demonstrated to thousands of users. Where the working conditions are such as to cause a buyer to doubt as to what is best suited to the case the company is prepared to advise on receipt of details.

Hartford Blower Catalogue.

The Hartford patent improved adjustable blowers and exhaust fans are illustrated and described in the Hartford (Conn.) Blower Co.'s new catalogue, now being distributed. This company makes a specialty of furnishing heating, ventilating and drying systems, as well as exhaust and conveying systems, together with forced and

induced mechanical draft apparatus. It makes and submits designs and estimates without cost to those who contemplate installing such systems.

For Saw and Knife Fitting.

Copies are now obtainable of a handy book for mill managers, superintendents, foremen and saw filers. The publication tells all about the B. T. & B. saw and knife-fitting machinery and tools manufactured by Messrs. Baldwin, Tuthill & Bolton, of Grand Rapids, Mich. This firm offers one of the most extensive lines of filing-room appliances obtainable anywhere, its products including a considerable number of new machines and tools recently developed. The book mentioned is of good size for the pocket. It contains nearly two hundred pages of descriptive and illustrative data regarding the B. T. & B. appliances.

From Union Rail Co.

Pocket memorandum books are common as advertising novelties, issued by business houses to keep recipients in mind of the facilities they offer. But it is not common to find issued such a useful and presentable pocket memorandum book as is being distributed by the Union Rail Co., offices in Farmers' Bank Building, Pittsburgh, Pa., miles at Huntington, W. Va. The Union Rail Co.'s brochure contains some valuable data compiled from the United States census report of 1900, together with other handy information for busy men, calendar pages for notes, maps of the United States and its possessions, and compartments for carrying currency. The Union Rail Co. is ready to submit estimates to buyers of rails and solicits correspondence from purchasers.

Elephant Brand Phosphor-Bronze.

Manufacturers, purchasers of and dealers in "Elephant" brand phosphor-bronze are notified that revised price list No. 22 of that product is now being distributed. This booklet of prices cancels and withdraws all previous quotations, and discounts on specified quantities can be obtained by addressing the manufacturer direct. The Phosphor-Bronze Smelting Co. also informs the trades that its new rolling mill is now in successful operation, and with greatly improved facilities and a well-assorted stock of manufactured goods it is able to meet the demand promptly. Catalogue No. 22 is replete with data and specifications regarding the bronze mentioned and the other alloys produced by the company. The main offices are at 2200 Washington avenue, Philadelphia, Pa., where requests for catalogue can be addressed.

Industrial Plants.

A special number of "Industrial Plants," dated January, is being distributed. It contains a history of the construction of the new plant of the Jeannsville (Pa.) Iron Works and the contents will interest those who want to keep posted regarding the latest developments in building and equipping manufacturing establishments with reference to producing the best possible goods at the least possible cost. The Jeannsville plant is a model of its kind, and the details regarding it should have the consideration of every thoughtful factory manager. Messrs. Ballinger & Perrott, Twelfth and Chestnut streets, Philadelphia, architects and engineers, had the design and erection of the Jeannsville buildings and the equipment of boilers, heating system, etc. Under their personal supervision and associated with them as specialists were Messrs. Dodge & Day, modernizing engineers, also of Philadelphia. Write the architects for a copy of "Industrial Plants."

The Sturtevant Catalogue.

The second edition of catalogue No. 115, the general condensed catalogue of the B. F. Sturtevant Co., Boston, Mass., is now ready for distribution.

It describes and illustrates a number of new apparatus manufactured by this enterprising company, among which are: A new type of hand-blower; several new types and sizes of forges; new sizes of vertical single and double engines; a new type of enclosed vertical compound engines; new type of semi-enclosed bi-polar and four-pole motors; new sizes of generating sets, with vertical compound engines; factory equipments, such as bench-legs, pattern storage shelf brackets, electric hoists, cast-iron sinks, trench cover-plates, etc.; industrial railway equipments, such as cars, truck ladies, turn-tables, T-rails, etc. It also contains a description of the various Sturtevant systems, such as heating and ventilating, special ventilating, drying, conveying and mechanical draft systems.

Electric Power in Factories.

Many manufacturers have found that the economies of production are largely enhanced by the adoption of electricity as a motive power. Yet many others have not given the subject of electric power for manufacturing plants the attention it deserves. This latter class especially will find interesting data and illustrations in the new catalogue issued by the Triumph Electric Co., of Cincinnati, Ohio. This company has been successful in building and installing electrical-driving equipment for various kinds of machinery. Its catalogue shows motor attachments to machines in various lines of industry, indicating the many possibilities in this class of work. Manufacturers are daily realizing more and more generally the great opportunities for economy involved in a correctly designed and installed system of motor-driving. They will find that the Triumph Electric Co. is prepared, with its corps of engineers, to give the best possible results in such work. A perusal of the catalogue will assist all who think of investigating the possibilities in the electrical drive, and requests for copies are invited.

AN IMPROVEMENT IDEAL.

The Broad Suggestion of Mr. Frederick L. Olmstead.

Though it is hardly likely that the suggestion made by Mr. Frederick Law Olmstead regarding the improvements of the burned district of Baltimore will be adopted in full, there are certain broad principles underlying them which observed will help to simplify the problem of restoration. His reasoning about the widening of certain highways, such as Pratt street, Light street, St. Paul street, Holliday street and West Falls avenue, is predicated upon immediate needs and future probabilities and upon facts of experience. The practical hearings of these proposed changes will be manifested as the authorities tackle the problems. In the meantime certain broad suggestions of Mr. Olmstead ought to be regarded. In his letter to Mr. Charles K. Lord, chairman of the Sub-committee on Streets, he wrote:

"If the main lines of circulation are properly provided for, somewhat as discussed above, the sub-division of the intervening space by means of secondary streets, alleys, courts and yards for passage and for light and air becomes a local question, or rather a series of local questions. It is extremely likely that some of the arrangements of minor streets and alleys which grew up when wharf property south of Water street was filled in and used for warehouses are not as well suited to present requirements as some other arrangements might be, and it is undoubtedly the case that there is some waste space in such streets, just as there has been in the yards at the backs of many very deep lots in the larger blocks. But it is impossible to apply any general rule to meet the different requirements of use in different cases, and improvements in those respects can be made only in conference with the owners of the land.

On the other hand, the possibility of such improvements should not be lost sight of; it is to the interest of the city that all the land should be put to its most complete productive usefulness and not in any way wasted, and to that end no effort should be spared by the proposed burned-district commission to call to the attention of land owners the possibilities of a more profitable use of land to be secured by local rearrangement of street, alley and lot lines, and to offer facilities of the commission for the prompt effecting of such alterations by means of closing or narrowing por-

tions of streets and alleys, widening others or laying out new passages of such size and location as will conduce to the most profitable and productive development of the land. To this end it is important that the commission should have powers of taking land and rights in land under the exercise of the right of eminent domain to the full limits permitted by the State Constitution, and that the process of making takings under this power be simplified and expedited in every way possible.

South of Pratt street, among the docks and wharves, problems are involved, the wise solution of which requires special technical knowledge quite beyond my province. It is, however, perfectly apparent that the arrangement of narrow docks and broad wharves occupied by warehouses which existed before the fire had become antiquated and ill-adapted to the needs of modern commerce, and that some radical reorganization is necessary if the city is to realize the full benefit of its harbor. It would seem as though the city should condemn the whole property south of Pratt street, bring about its readjustment according to whatever plan may seem likely to produce the best economic results, and to lease the wharf privileges to the highest bidders. The work of reconstruction might be paid for directly by the city by means of special wharf bonds, interest and sinking-fund charges to be met by rentals, or the reconstruction might be financed by a separate corporation to which the city would lease the whole tract for a sufficient term of years on a building lease. The main point is that in order to make this property as useful to the community as it ought to be, to make it contribute as it ought to contribute to the rapid and convenient handling of the water-borne commerce of the city, to make it as remunerative to the city, whether by rentals or taxes, as it ought to be, will require so radical a change that it can hardly be accomplished except by bringing the whole property under one ownership and developing it as a consistent whole.

"In whatever manner and for whatever classes of commerce it may prove, upon expert examination, most profitable to have this water-front development, it should be borne in mind, as it never has been in the past in Baltimore, that quite incidentally to such commercial use of the waterfront it is perfectly possible, at little or no additional cost, to make it not only convenient, but orderly and shipshape, adapted not only to the speedy handling and dispatch of freight and passengers, but to giving the passengers pleasure as they come and go, and to affording places which those who are not sailing can get a good sight of the harbor and its movement. There is not a more interesting sight among all the activities of a city than the coming and going and maneuvering of big vessels and small craft in a busy harbor, and there is no reason whatever why a reasonable number of well-selected wharves should not have upon their long one-story sheds easily accessible promenades, open to the public, and fitted at the outer end at least with open-pavilion roofs for shade and shelter. Such provisions for recreation might be of great value east of Jones' Falls, where the harbor is broader and where they would be nearer to the population of East Baltimore, which needs them

sadly; but my point is that in a comprehensive and intelligent treatment of the water-front many matters of appearance and recreation can be provided for by the exercise of some thought in such a way as to bring incidentally a double return to the public without any material addition to the taxpayers' burden.

"Parks, in the sense of considerable spaces reserved from other occupation and use for purposes of outdoor recreation, essential as I believe them to be as complements to densely occupied commercial districts, do not seem to be logical as parts of such districts. They ought to be reasonably near, and if a commercial district be very large they must occur with it, so as not to be too remote; but even so they are not of it, but are places of retirement from it. Parks, in this sense, are not to be sought as decorations of such a district, because their beauty is of a kind and of an expression quite opposed to the functions and logical tendencies of the modern urban center of compactly grouped high office buildings. The kind of beauty to be sought as appropriate to such a district is not to be found in objects, however beautiful in themselves, which occupy a material amount of space that might be used for the vital purposes of the district without themselves contributing to the efficiency with which business can be conducted. Business cannot be efficiently conducted in offices without means of passage to and fro or without light or air, and, taking the district as a whole, a good deal more space must be left for such purposes than any individual land owner is disposed to leave on his own lot; and these incidental and desirable spaces of public ground ought to be agreeable in appearance with a beauty suitable to their functions.

"Shapeliness in plan is first to be sought, and that kind of shapeliness which fits and expresses the real purpose of the space. Then may come decoration. If the space be needed wholly for passage, its appropriate decoration may lie only in the choice of a suitable pavement, of the most convenient sort for the particular use, but having an agreeable color and texture and forming an agreeable pattern, instead of an ugly one, by the arrangement of its parts. But in most cases absolutely the whole space is not taken up for passage to and fro; there are at least lampposts and other street fixtures which may be elaborately ugly, or beautifully simple, or otherwise, without affecting their efficiency for their primary purpose; and they may serve to decorate the space or the reverse, just according to the way they are shaped and the way they are placed. But the spaces desirable for light and air or fire protection may admit of more than these necessary fixtures, in addition to the space absolutely needed for passage, and opportunity is presented for other more purely decorative treatments. Space may be found in special instances, perhaps, for the trunks of trees at the ground level, with room below ground for the roots and above for the branches, or space for drinking fountains, or a monument, or a purely decorative projecting base or porch, or balustrade, or pavement, or a piece of turf. But if it is perfectly evident that any of these things are put where there is no room for them, where the space is needed for more vital purposes, they become blemishes

rather than appropriate embellishments; and if it is evident that space is made solely for their display, and is not needed for any other purpose directly contributing to the proper functions of the place, they tend to become inharmonious and extravagant.

"The relative importance of compactness and of room for light, air passage and fire protection varies greatly, even with a single limited commercial and financial district. Offices may pile one above another for 200 feet, with only narrow streets on two sides, while on equally costly land a bank may erect a one or two-story building by preference on a broad street or plaza, and may pay the owner of the next lot a good, round sum for an agreement not to erect a tall building there.

"On precisely similar ground, a reasonably open space ought to be left about valuable municipal and governmental buildings, and not only because of the practical desirability of the space for light and air and fire protection, but because it properly expresses their greater importance and preciousness. And so much of the space as may not be needed for passage or other such public purposes may very properly be devoted solely to decoration.

"The desirability of a plaza west of the court-house I have mentioned in connection with St. Paul street, and the desirability of one west of the Custom-house, with a site for a new Chamber of Commerce Building opposite, I have touched on in connection with Holliday street. If the cost is not prohibitive, the whole of the northern portion of the blocks south of the City Hall and post office might well be acquired also, with a view not merely to give proper setting to these buildings, but also to provide for future municipal buildings, for which those blocks would provide ample margin of open space.

"The above completes my report in regard to the matters which have been under consideration by your sub-committee; but upon a closely allied matter certain considerations have occurred to me that may prove to have some suggestive value to the general committee or to some of its other sub-committees.

"There can be no question, after all is said and done, that the appearance of the burned district, when rebuilt, and its excellence, in other respects, will depend far less upon any corporate action that the city is likely to take than upon the wisdom, skill and taste with which the property owners and their architects proceed in the planning and erection of new buildings. It is a commonplace thing to say that one of the worst faults with the architecture of American cities is its heterogeneity. Ordinarily, the architect of each building plans it as an independent problem, without regard to the character of the surrounding architecture, and often in striking and unnecessary discord with its neighbors.

"I cannot but feel that with so many buildings to be erected simultaneously there is a splendid opportunity for more harmonious results. I do not at all mean that uniformity of design or even of style or material could be secured throughout any large area; practical requirements and individual preferences are too varied for that, and, indeed, it is not to be desired, because of the danger of monotony and loss of individual interest. What I mean is that if the architects of half

a dozen adjacent buildings should confer together, after each had blocked out the plan of his building with its owner, and should look over each other's plans and sketch elevations, the chances are that by a moderate amount of friendly adjustment, by deciding on a uniform light for certain features which might occur in common, perhaps by the adoption of the same kind of brick in adjacent buildings or by making the stone trim on a brick building of the same kind of stone as a stone building next door, by any number of minor adjustments, many discordances would certainly be avoided which would as certainly occur if the architects work separately.

"Moreover, from a purely economic standpoint such conferences would be of the utmost value to owners. Take, for example, the matter of light and air spaces; if buildings on adjacent lots are planned with a little cooperation, light and air spaces may be made to do double duty at great economy of ground area. Again, common entrance vestibules and stairs might often be arranged for two adjacent commercial buildings, with a great saving in valuable store-front space on the ground floor. There are not a few instances where smaller office and warehouse buildings cannot individually afford an elevator, but where an elevator could be properly planned be made to serve two otherwise distinct buildings, one paying a rental to the other for the use of the elevator service.

"The possible advantage of conference and cooperation in planning are, perhaps, sufficiently evident, but I fear they will not be sufficient to bring people together unless the path is made easy. An office ought to be established at once, under the direction of a small committee of architects, embracing at least one architect from outside of Baltimore but having work here, with an efficient secretary paid to give his whole time to the work, and this office should be kept in close touch with the Inspector of Buildings and the burned district commission, and should keep posted as to all owners intending to build and ascertain their architects, and at once bring them into conference with others planning buildings in the same vicinity. The office should have a drafting-room and facilities for meeting there to discuss plans and work over them, and it should be got under way immediately. If it could be given official sanction, as by being supported by the Mayor, as adviser to the Building Inspector's department, it would probably strengthen its position, but it should not be bound with red tape, and should keep clearly to the purpose of bringing about friendly voluntary conferences."

North Carolina Minerals.

A report of the Geological Survey of North Carolina shows that the aggregate value of the product of the mines of the State in 1902 was \$2,003,077, of which \$93,650 represented gold in 33 counties and \$30,212 silver in the same counties, \$52,771 iron, \$81,653 plate mica, \$24,500 coal, \$64,160 monazite, \$908,105 clays and \$338,749 granite.

The Citizens' Bank has begun business at Dublin, Ga. The officers are: President, E. P. Rentz; vice-president, William Pritchett; cashier, E. S. Blackshear; directors, E. P. Rentz, William Pritchett, J. H. Beacham, T. L. Grimer, J. E. Lord, A. T. Summerlin, J. M. Williams and W. B. Rogers.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office Manufacturers' Record.

Baltimore, Md., March 1.

The Baltimore stock market resumed business on February 24, after the more than two weeks legal holiday, which was established immediately after the great fire. As had been predicted by conservative brokers, the resumption of trading was attended by comparatively small declines in securities representing properties affected by the conflagration. Particular attention was directed toward the issues of the United Railways & Electric Co., which suffered considerable loss of business in consequence of the fire, but the drop in the income bonds, which it was anticipated would be most affected, was only about six points, the last sale before the conflagration being at 56½ and the first sale after the fire being at 50. There was, however, a fractional decline to 49%, from which point these bonds gradually recovered to 52½, the recovery being well held and making the net loss in the market price 4 points. The First Consolidated mortgage 4's, which sold before the holiday at 91¾ and 92 reopened at 90, but soon rose to 91¼ and fluctuated between that point and 90¼, the net loss being less than 2 points. The common stock, which had been traded in and around 8, fell off about 1½ points, but speedily recovered to 7½. Consolidated Gas was practically unaffected, the common stock selling at 58, whereas 59 was bid before the fire. The last mortgage bonds of the G. B. S. Brewing Co. displayed a drop of 1½ points at 46½, but this loss was more than made up by the advance which followed during the week. There were some other declines in local securities, but the most notable change was the rapid rise in stock of the Baltimore Brick Co., which advanced from 9 to 20. The advance was, however, not fully held, the shares dropping back 3 points from the highest. There was a tolerably active business during the week in United Railways stock and bonds, with some little doing in G. B. S. Brewing issues. The demand for investment securities was moderate and prices were well sustained.

In the dealings United Railways common sold between 6¾ and 7½, the incomes between 49% and 52½, the 4's between 90 and 91¼, and ex-interest at 88¾. Light & Power preferred at 35 and 36, Consolidated Gas at 58, and Gas 5's at 111, the 6's at 108¾ and 108½, and the 4½'s at 100¾. Seaboard common was traded in at 8½ and 8½, the 4's at 66 and 66½, and the three-year 5's at 77. Cotton Duck common sold at 1½ and the 5's at 60. G. B. S. Brewing common changed hands at 5, the incomes at 24 and the 1sts from 46½ to 49.

National Exchange Bank shares sold at 185, Howard at 11½ and Citizens at 25; International Trust at 85, Continental Trust 100 and 100½, Mercantile Trust at 124, and Fidelity & Deposit at 122.

Other securities traded in were as follows: Georgia Pacific 6's, 119%; Atlantic Coast Line new 4's, 83; do. Consolidated 4's, 92%, and ex-interest at 90%; Baltimore Brick, 17 to 20; Northern Central, 88 and 90; Atlanta & Charlotte 7's, 107%; Virginia Midland 2d, 112; do. 5th, 109 and 109%; International

Mercantile Marine, preferred, 20; Baltimore City 4's, 1926, 113; do, 3½'s, 1930, 109½ and 110; Albany & Northern 5's, 91; Georgia Southern & Florida 5's, 113; Georgia, Carolina & Northern 5's, 106; Georgia & Alabama 5's, 103; Baltimore City Passenger 4½'s, 102; North Baltimore 5's, 114; Wilmington & Weldon 5's, 115; Atlanta Street Railway 5's, 104½; City & Suburban 5's (Washington), 90½; Virginia Midland, 4th, 107½.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended March 1, 1904.

Railroad Stocks. Par. Bid. Asked.

United Railways & Elec. Co.	50	7	7½
Seaboard Railway Common	100	8	8½
Seaboard Railway Pref.	100	15½	16
Atlantic Coast Line	100	104½	110
Atlantic Coast Line of Con.	100	220	235

Bank Stocks.

Citizens' National Bank	10	24½	26½
Commer. & Far. Nat. Bank	100	50	55
First National Bank	100	150	150
MERCHANTS' NATIONAL BANK	100	190	190
National Bank of Balt.	100	105	113
National Exchange Bank	100	181	190
National Howard Bank	10	11	11
National Mechanics' Bank	10	23	30
National Union Bank of Md.	100	114	120
Third National Bank	100	100	125
Western National Bank	20	...	38½

Trust, Fidelity and Casualty Stocks.

American Bonding & Trust	50	65	65
Central Real Est & Trust	50	32	32
Continental Trust	100	100	100
Fidelity & Deposit	50	120	120
International Trust	100	83	87
Maryland Casualty	25	44½	45½
Mercantile Trust & Deposit	50	120	120
Union Trust	50	40	40
U. S. Fidelity & Guaranty	100	100	110

Miscellaneous Stocks.

G. B. & S. Brewing Co.	100	5	5½
United Elec. L. & P. Pfd.	50	30	37
Cotton Duck Floating Trust	100	1½	2
Consolidated Gas	100	58	60

Railroad Bonds.

Albany & Northern 5s	91	92½	92½
Atlanta & Charlotte 1st 7s	1907	107½	107½
Atlanta Coast Line Con 4s	90½	91	91
Char. Col. & Ang. 1st 5s	1910	110½	110½
Char. Col. & Ang. 2d 7s	1910	111	111
Columbia & Greenl. 1st 6s	1916	111½	111½
Geor. Car. & Nth. 1st 5s	1929	105	108½
Geor. South. & Fla. 1st 5s	1945	112	113
Georgia Pacific 1st 6s	1922	119	120½
Petersburg, Class A 5s	1926	120	120
Petersburg, Class B 6s	1926	123	123
Piedmont & Cum. 1st 5s	1911	105½	107
Raleigh & Augusta 1st 6s	1926	116½	117
Savannah, Fla. & West. 5s	1934	110	110
Seaboard & Roanoke 6s	1916	106	108
Seaboard & Roanoke 5s	1926	106	108
South. Railway Con. 5s	1994	111	111
Virginia Midland 1st 6s	1906	105	105
Virginia Midland 2d 6s	1911	108½	112
Virginia Midland 3d 6s	1916	115	115
Virginia Midland 4th 3-4-5s	1921	107	107
Virginia Midland 5th 5s	1926	100½	110
West. North Car. Con. 6s	1914	112	115
West. Virginia Con. 1st 6s	1926	108½	110
Wilmington & Wel. Gold 5s	1935	115	120
Charleston City Ry. 5s	1923	103	104½
Charleston Con. Elec. 5s	1999	77	81
Newsp. News & Old Pt. 5s	1938	100	100
Norfolk Street Ry. 5s	1944	102	102
United Railways 1st 4s	1949	88	88½
United Railways Inc. 4s	1949	51½	52
Seaboard 4s	1949	64½	66½
Georgia & Alabama Con. 5s	...	103½	103½

SOUTHERN COTTON MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending March 2, 1904.

	Bid. Asked.
Abeville Cotton Mills (S. C.)	75
Aiken Mfg. Co. (S. C.)	85 90
Anderson Cotton Mills (S. C.)	121
Arkwright Mills (S. C.)	105
Augusta Factory (Ga.)	70
Avondale Mills (Ala.)	101
Baldon Mills (S. C.)	102
Brandon Mills (S. C.)	105
Buffalo Cotton Mills (S. C.)	101
Buffalo Cotton Mills (S. C.) Pfd.	101
Cabarrus Cotton Mills (N. C.)	122
Chiquita Mfg. Co. (S. C.)	95
Clifton Mfg. Co. (S. C.)	95
Clinton Cotton Mills (S. C.)	133
Courtenay Mfg. Co. (S. C.)	110 115
Dallas Mfg. Co. (Ala.)	78 85
Darlington Mfg. Co. (S. C.)	91
Eagle & Phenix Mills (Ga.)	108
Easley Cotton Mills (S. C.)	101
Enoree Mfg. Co. (S. C.)	74
Enterprise Mfg. Co. (Ga.)	76 85
Exposition Cotton Mills (Ga.)	149 200
Gaffney Mfg. Co. (S. C.)	90
Graniteville Mfg. Co. (S. C.)	132½ 150
Greenwood Cotton Mills (S. C.)	102
Grendel Mills (S. C.)	99 103
Henrietta Mills (N. C.)	185 210
John P. King Mfg. Co. (Ga.)	81 90
Lancaster Cotton Mills (S. C.)	103
Lancaster Cot. Mills (S. C.) Pfd.	100
Langley Mfg. Co. (S. C.)	95 100
Laurens Cotton Mills (S. C.)	103 102
Lockhart Mills (S. C.)	102
Louise Mills (N. C.) Pfd.	102
Marlboro Cotton Mills (S. C.)	101
Mills Mfg. Co. (S. C.)	100

Mills Mfg. Co. (S. C.) Pfd.	100
Monarch Cotton Mills (S. C.)	90 95
Monaghan Mills (S. C.)	100 103
Newberry Cotton Mills (S. C.)	120
Norris Cotton Mills (S. C.)	110
Odel Mfg. Co. (N. C.)	100
Orangeg Mfg. Co. (S. C.) Pfd.	102
Pacolet Mfg. Co. (S. C.)	100
Piedmont Mfg. Co. (S. C.)	170
F. W. Poe Mfg. Co. (S. C.)	200
Roanoke Mills (N. C.)	136
Trion Mfg. Co. (Ga.)	102
Saxon Mills (S. C.)	100 103
Sibley Cotton Mills (Ga.)	99 65
Southern Cotton Mills (N. C.)	91
Spartan Mills (S. C.)	137½
Tucapua Mills (S. C.)	125
Union Cotton Mills (S. C.)	145 152
Warren Mfg. Co. (S. C.)	100 102
Washington Mills (Va.)	20
Washington Mills (Va.) Pfd.	100
Whitney Mfg. Co. (S. C.) Pfd.	115 125
Wilming. Cot. Mills (N. C.) Pfd.	100
Woodruff Cotton Mills (S. C.)	95 100

New Corporations.

Ira C. Bryant and others are reported organizing a national bank with \$25,000 capital at Annona, Texas.

The Wilson Fire Insurance Co. is reported organized at Wilson, N. C., by W. S. Harriss & Co. and others.

Thomas H. White & Co., formerly at 104 Commerce street, are now located at 216 North Gay street, Baltimore.

Water Valley, Miss.—Application has been made to the Legislature to permit city to issue \$25,000 of school bonds.

The Dallas Retail Grocers' Association, of Dallas, Texas, will, it is reported, organize an insurance association.*

Nashville, Tenn.—The city has sold \$100,000 of sewer bonds and \$50,000 of street bonds at par and interest to W. N. Harris & Co., of Chicago.

The First National Bank of Lewisburg, Tex., has been authorized to begin business, capital \$25,000. B. L. Spencer, president; E. L. Berry, cashier.

The Farmers' National Bank of Manor, Tex., capital \$25,000, has been authorized to begin business. J. L. Rich, president; J. W. Hoopes, cashier.

It is reported that a new banking firm to operate under a State charter, capital \$50,000, is being organized at Pensacola, Fla., by J. Simpson Reese and others.

The General Electric Co. has established temporary offices at the Mount Royal Flats, corner of Mount Royal avenue and Calvert street, Baltimore.

The First National Bank of Covington, Tex., capital \$25,000, has been authorized to begin business. A. M. Douglass, president; R. J. Cowley, vice-president.

The First National Bank of Linden, Ala., has been authorized to begin business; capital \$25,000. J. W. Wood, president; C. H. Miller, vice-president; W. F. Rodes, cashier.

The Oliver Springs Banking Co., capital \$15,000, has been chartered at Oliver Springs, Tenn., by H. Seinknecht, Samuel Tunnell, H. C. Thompson, David C. Richards and J. F. Taylor.

The Adams National Bank, of Devine, Tex., capital \$50,000, has been approved. The organizers are W. B. Adams, C. M. Thompson, G. T. Bristoe, A. B. Williamson, T. C. Frost and Mrs. Josephine H. Christ.

The Bank of Stratham, of Stratham, Ga., has been incorporated, with \$25,000 capital. The incorporators are L. O. Benton, of Jasper; Ganaway Malcom, M. A. Milsaps and others, all of Jackson county.

The officers of the Royal National Bank of Palestine, Tex., are N. R. Royall, president; J. W. Wright and Hapsome Garey, vice-presidents; Tucker Royall, cashier; C. W. Hanks, assistant cashier.

The Union Bank & Trust Co. is re-

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ported to have begun business at Pulaski, Tenn., capital \$60,000. J. D. Pullen, president; R. H. Porter and N. A. Crockett, vice-presidents; John M. Harwood, cashier.

The Merchants & Farmers Bank of Eastman, Ga., has been chartered, capital \$50,000. Among the incorporators are V. M. Roberts and S. Herrman, of Eastman, and J. W. Cabaniss and M. Heimer, of Macon.

The First National Bank of Williamsburg, Ky., capital \$25,000, has been approved. The organizers are E. S. Moss, Williamsburg, Ky.; J. B. White, R. N. Jackson, H. C. Thompson, William Golden and W. L. Moore.

The Citizens' Bank of Rogers, capital \$50,000, of which \$10,000 has been subscribed, has been organized at Rogers, Ark. H. L. Stroud, president; Alonzo B. Stroud, vice-president; W. H. Cowan, secretary and treasurer.

The Effingham County Bank is reported organized at Guyton, Ga., by W. S. Witham, of Atlanta, and Mayor H. R. Tarver, Samuel H. Morgan, F. B. Gnann and J. Martin Gnann, of Guyton. The capital is to be \$25,000.

The Escambia Security & Investment Co., of Pensacola, Fla., has been incorporated to conduct a building and loan business, capital \$250,000. F. W. Marsh, T. F. McGourin and J. E. D'Alemberte are among the incorporators.

The Bank of Eudora has been chartered at Eudora, Ark., capital \$15,000. S. A. Scott, president; E. S. Hilliard, vice-president; J. M. Worthington, secretary and treasurer. R. D. Duncan, of St. Louis, is also interested.

The First National Bank of Mt. Airy, Md., has organized by electing the following officers: President Milton G. Urner, of Frederick; vice-president, Albert W. Hall, of Shaffersville; cashier, J. L. Burdette, of Damascus.

The Perry-Dowden Loan & Investment Co., of Oklahoma City, O. T., capital \$5000, has been incorporated by E. Dowden, E. H. Perry, C. Porter Johnson, of Oklahoma City; J. W. Edwards, of Olustee, and S. B. Edwards, of Eldorado.

The Bank of Ashpole has been chartered at Ashpole, N. C., and the following officers have been elected: A. S. Thompson, president; J. P. Brown, vice-president; T. L. Blue, cashier. Directors, A. F. Floyd, R. O. Pitman, O. I. Floyd and A. N. Mitchell.

The First State Bank of Putnam, Custer county, O. T., has been chartered with \$5000 capital by O. B. Kee and

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Supplement Pages, Manufacturers' Record.

To meet the exigencies of the printing of the Manufacturers' Record at a point 100 miles distant from its editorial and business offices, late matter for this week's issue is published in these supplement pages.

A Wide-open City.

Baltimore must be a wide-open city—not wide open, as that term is usually applied to a city, but wide open in the broadness of its invitation to the world to come and take part in its rebuilding. No petty thought that Baltimore contractors or architects or capital are equal to such an emergency can possibly be harbored for a moment. If any man in Baltimore has so little realization of the magnitude of the task before this city as to imagine that our own people are equal to providing the capital and the skill needed, he would do well to retire to some country town or village. Baltimore faces a task of appalling magnitude—a task which no city in America could alone and unaided by outside skill and energy handle. It is true that, if we decided to take five or ten years in which to reconstruct the burned area, local architects and builders might be equal to it, but it is not conceivable that any man of sense can even contemplate such a delay without realizing that the loss thereby would be greater than the loss we now face.

Baltimore has met the situation with marvelous strength and alertness, and it is taking care of much of its trade; and yet, can any one imagine the drain upon vitality, physical and mental, the loss of prestige, the utter demoralization which would follow the continuation, even for a year, of the cramped conditions with which nearly all business interests, financial and mercantile, are now forced to contend? In the excitement, in the stimulation to brain and body which such a great emergency arouses, men accustomed to doing business under the most favorable environment can, for a time, work under the most unfavorable conditions. The merchant whose splendid, well-equipped warehouse gave him the best facilities may for a time stand the strain of using any sort of ill-favored place; the banker, accustomed to the facilities of a well-constructed building, may do business in a small store heated by an oil stove and with scarce room to turn around. But all of this means an ultimate drain on vitality, an added burden to the cost of doing business and a gradual lessening of splendid courage and force which, if stretched out over a year or two, would cost the city more than the loss which has already fallen upon it. In these days an attempt to do business, except temporarily, without the best advantages for economy in every branch, whether it be the saving in the counting-room or in the handling of goods, in competition with those who have every advantage, is about as foolish as it would be for an army equipped with the old muzzle-loading rifle to expect victory in a contest against the

Mauser. Baltimore must move with tremendous energy, and with that amazing alacrity which it displayed in starting business after the fire, to the rebuilding of the burned district and the complete reconstruction of its business facilities. Every day's delay means a final loss in business and in the world-wide prestige which would come from a rapid rebuilding. Let there be a delay for a few months only, and the world will say that Baltimore was not equal to the task, and then in vain shall we seek to regain what then would have been forever lost—the world's admiration for pluck and energy.

Our task is a great one. Every outside man of broad experience in great undertakings and great engineering and construction problems, in sanitation, is impressed with the idea that Baltimore has not fully comprehended the magnitude of its problem. We have already frittered away priceless time. Now we must act, and act quickly. There must go out to the world Baltimore's desire that the engineering, the architectural, the construction forces of the country shall center here. Should any narrow-minded being think of opposing such a policy with the idea that this work must be kept for Baltimore skill alone, he ought promptly to be asked to leave the city, for there is no room here for a mind of so small a calibre. Let us invite the capital of the country, let us do all in our power to induce the great building concerns of international reputation to come here and take part. What an inspiring sight it would be to see a thousand new houses under construction, with thousands of mechanics and dozens of great constructing firms, local, national or international, in a rivalry to see who could produce the greatest and quickest results. That would give new energy to the merchant and the manufacturer, that would command the world's attention, and then new trade and new capital and new men of brain and brawn would crowd our streets, and become factors in building a Baltimore greater than any we have ever dreamed of. Now is the time, here is the opportunity for centering the constructive energy of the country in one city, such as no other city ever had, for when Chicago burned there were no such giant forces in operation as now make possible the rebuilding of Baltimore with a celerity never seen elsewhere. Baltimore has now a supreme opportunity to open wide its gates and bid the world come in and share in its upbuilding. Upon the progressive forces of this city must rest this responsibility, and according to how they meet it will the answer be as to what of Baltimore's future?

The Rebuilding of Baltimore—II.

[Written for the Manufacturers' Record.]

By ALBERT PHENIS.

Is Baltimore menaced by a dangerous optimism?

Is she placing too much reliance on her unaided and individual ability to recover from the fire?

Are those at the fore alive to the conditions that exist?

From a spirit I have discovered in various quarters I am disposed to regard these as questions of such vital importance that I shall devote the main portion of this week's installment of my articles on "The Rebuilding of Baltimore" to a discussion of this phase of the situation here.

Last week I spoke of the dauntless courage with which the business men of Baltimore have faced an appalling disaster, and rightful praise was given to the spirit which can rise triumphant over such an almost unparalleled catastrophe. But there is another side to this picture, and one which is not to be viewed without grave concern. Suggested here and there, with sometimes more, sometimes less degree of definite form, it was revealed in clear relief and bold outline in a talk I have had with one of the foremost architects of the city, a gentleman whose culture, intelligence and character give him not only an eminent position in his profession, but have also combined to make him a representative citizen, and one whose views have weight with the commercial interests of the town. At his own request his name is not given here; not that he evinced disinclination to be known as entertaining the views he expressed, but he said he desired that anything which appeared accredited to him should be carefully prepared by himself and printed over his own signature. As for the position itself, it was stated frankly and without reserve. It was to the effect that it is impracticable and unnecessary to rush the rebuilding of Baltimore; that there will not be much done toward replacing the burned buildings within a year; that it will be three, or perhaps five years, before all the burned district is rebuilt; and that, under these circumstances, local architects and local builders can do all the work.

In talks I had had with other men here, the necessity was recognized of rebuilding the burned district with all the speed in the city's power, in order that Baltimore's trade might not slip away from it. The gentlemen above quoted said there was nothing to be feared on that score, as Baltimore's business was going along with little or

no interruption; that the manufacturing interests of Baltimore had hardly been touched, and that the jobbing and retail trade had already adapted itself to circumstances, and the normal volume of business was being practically maintained.

As to my suggestion that outside architects, builders and capital would be needed to restore the town, the statement was made that, while no Chinese wall existed around Baltimore, yet on account of peculiar conditions here, which must be studied on the ground, no outside architect could hope to compete with local men, unless he took an office here and became identified with the town; that as a matter of fact the architects here are fully capable of coping with the situation as it exists; that the builders here could do all the work as fast as it was required, and that whatever money would be needed for improvements could be secured at any time by anybody who had adequate security to give.

I regard this position as fatuous, false and untenable. I consider it dangerous to the welfare of Baltimore, and even to its very existence, as a commercial center of the larger class. And I furthermore have ample reason to believe that the views quoted do not represent the sentiment of the city generally, do not voice the convictions and the attitude of the people of Baltimore as a whole. That there is a sentiment of that kind existing here, sufficiently large and powerful to demand consideration, the illustration I have given and other proof bears out. My attention was first called to the matter by Mr. Thomas E. Thompson, although I have since been told that soon after the fire, before my arrival here, a meeting of members of the Builders' Exchange duly resolved that it was not necessary for outside builders to come here, and the people of Baltimore were asked to entrust all the work to local hands. Mr. Thompson is a native of Baltimore, and has lived here all his life. He has been prominently identified with building operations here, having been superintendent of construction of the Continental Trust Building, the Fifth Regiment Armory, an important city school building, and other work. He is now connected with the Murphy Construction Co., of New York, which has opened an office here under his supervision at 202 North Liberty street. In the course of a talk I had with him on general conditions here Mr. Thompson made the statement,

surprising to me then, that some of the victims of the fire had refused to entertain any propositions from outside architects or builders, and that he had found evidences of an attempted combination among local builders and architects to close the door against all outsiders.

"If Baltimore is to be rebuilt any time soon the local builders can't begin to take care of the work," said he. "Why, there are not more than two or three builders here who are equipped to handle big jobs, and they would be soon choked up; and, any how, they are not prepared to finance any undertaking of any size."

Acting on this suggestion I made inquiry of other out-of-town men. Some had not encountered any local prejudice, others had, and then I broached the subject to the representative local man I have quoted, with the startling result I have recorded above.

I have studied this question, big and large; I am here "as an onlooker in Venice;" not as a Baltimore man, and yet as one representing a section of the country attached to Baltimore by the strongest ties of sentiment and business interests combined, I bring to the consideration of this matter of Baltimore rebuilding a sympathy no less profound and an interest scarcely less vital than that of any person on the ground. It is in the most friendly way, therefore, and because I believe it of supreme importance to the city that the matter shall be thoroughly stirred up, that I here indulge in criticism and point out what I believe to be a very dangerous course for any part of Baltimore's business interests to pursue.

In this same spirit I note the growing murmurs of discontent and likewise record my own surprise at the dilatory tactics of the city authorities of this town, with their interminable debating society, commissions and committees on suggestions to the man in the moon. Since the vision of John Bunyan I have never heard of any man, or set of men, who have found so many lions in the road as the authorities of this city have discovered in the way to the rebuilding of Baltimore. With well-nigh a month intervening since the fire, the whole matter of what to do and how is still in the air, and the sum total of actual achievement within the area burned is limited to the razing of some of the most dangerous walls and the removal of debris from the middle of the streets.

The gentle ways, the conservatism and the veneration for precedents and traditions which are so conspicuously ingrained in the Baltimore character seem likely to operate disastrously in an emergency such as this. Typical is that story of the attitude of the fine old typical gentleman who, during the progress of the conflagration, naively remarked: "Bless me, this is unusual for Baltimore." At every step since, and at every suggestion of action of any sort, this has been on the lips of the authorities of the city: "This is unusual for Baltimore."

So was the Galveston storm unusual for that town, and with eight thousand bodies—one-seventh of the population of the town—buried beneath the ruins of the thousands of houses destroyed, and with the shipping facilities and the railroads washed away, the surviving sufferers might well have found ample excuse for nerveless lamentation and delay. The appalling horror of that time no words can at all de-

scribe, and the harrowing experiences of those whose loved ones perished and whose property was washed away, will haunt their souls forever more. But strong men came to the front. With or without the most delicate precision as to authority and precedents the debris was cleared away, and as beneath the Southern sun it got to be an impossibility to identify and bury all the dead before they had become a menace to the very life of those who had survived, the rubbish was made into a funeral pyre, and by the hundreds—a thousand, and maybe more—the bodies, with scant and hasty rites, were committed to the flames, "unknelled, uncoffined and unknown." The storm occurred September 8. In forty-five days from that time, not only was the city entirely cleared, but almost all of the utterly destroyed wharfing had been permanently and even more substantially rebuilt, and the commerce of the port for October was greater than that of any other October in the history of the town.

Fortunately for Baltimore, there is nothing but the commercial side to the situation here. Even the widening of the streets, the parking of some squares, the artistic appearance and the height of the buildings to be built—everything that will be done, or that has been proposed—all resolve themselves in the final analysis to a business proposition, pure and simple. For it is good business to have commodious storerooms, attractive, light, and in buildings which please rather than offend people of means and taste; it is good business to have streets that do not become easily and hourly choked up, and through which fire engines may be drawn when occasion requires; it is good business to appeal to the artistic sense, to cultivate and foster it in the community at large by an attractive and artistic environment and adornment of public buildings and grounds. It is, furthermore, not only business, but a mere matter of elementary arithmetic to effect changes in street lines now which will be useful and advantageous every hour of the day for at least a thousand years to come. And above all, it is the voice of business that thunders out the call to get busy with these things at once, and whatever is to be done, let it be done now.

From 2500 to 2700 business houses have been destroyed. The very flower of Baltimore's jobbing, financial and retail district is in utter ruin. While all of the larger institutions of all kinds have found temporary quarters and have adapted themselves with amazing readiness to conditions and privations scarcely different from those of pioneer days in a frontier town, and it is likely that the hustle and courage and pluck of these people, met by the co-operation of a sympathetic constituency, largely of the South, will temporarily hold the bulk of the outside trade which Baltimore has enjoyed, yet it must not be overlooked by any one concerned that this business is being retained at the expense of a fearful waste of vital energy. Facilities are inadequate, quarters are cramped, ill-ventilated and poorly heated. If heated at all, and every feature of existence is an added tax put on the vitalities of the people, under the strain of which they must in time break down. Some houses have secured locations where facilities are fairly good, and such might continue indefinitely as they

are; the greater number, however, of the 5000 or so firms who were rendered homeless are in miserable makeshifts, uncomfortable to a degree, and uninviting to the public on whom they must rely. Bank presidents have been found shivering over oil stoves, on the verge of adding another victim to the long list of pneumonia cases the vital statistics now contain. Retail stores have dropped down wherever they could light; newspaper offices are in dingy quarters, hard to find, and the whole business of the city presents a ragged and uninviting appearance which, if maintained for one moment longer than actual necessity requires, will alienate the sympathies of the public as sure as fate and cause a loss of business that never will return. The experience of the anthracite coal men is an object lesson worth while considering. Being forced to resort to other fuel for the time, a considerable number of the former users of anthracite coal never have returned. It is always a little dangerous to let anybody find out he can get along very well without you.

It is of the greatest importance that building operations begin at the earliest moment, so advantage may be taken of the spring and summer working season. It must be borne in mind that the character of buildings which will go up will not be of the sort that can be rushed through in three or four months' time. Unless the open months are well utilized, and unless building operations are far advanced before the winter season begins, the whole work of rehabilitation will run square against the paralysis which the frosty season brings to buildings that are not enclosed.

Furthermore, unless Baltimore rebuilds her burned district at the earliest possible moment that the work can be done, with the biggest possible army of men that can be employed without literally getting in each other's way, the city is going to lose the splendid advertisement which such display of vigor and enterprise would command. Every old ruin and vacant lot that stares the visitor in the face two years from now might as well be a gifted Jeremiah with a voice of lamentation and despair. A burned-out warehouseman gave a contract for a new building the other day. "It must be done in 90 days," said he, "if I don't get it then I might as well wait a year." A similar situation confronts Baltimore. If a large part of the burned district is not rebuilt within a year, and with plans, too, for about all the remainder well underway at that time, she might just as well fence in the ruins now, stay in the quarters at present occupied, and rest content to be considered a slow-going town of the second or third class.

Now, with all due deference to the gentleman whose opinion I have given, I don't believe Baltimore's business men are going to stand for any such program as he has given out. I believe they realize that it is wearing them out to continue business as they now have to carry it on, and that a few months like this, with an indefinite wait ahead of them, would sap the energies of the entire town. I don't believe the property owners, those whose income from the lands has been cut off, are going to wait three or five years, or any considerable part of it, if by any means their revenues may be restored before, and I don't believe any set or combination

of men will be permitted to retard the restoration of Baltimore at the earliest possible moment. There is even an indication that the property owners will not wait indefinitely on the deliberations of the authorities as to what improvements shall be made and how, notwithstanding the present overwhelming sentiment favoring extensive utilization of this only chance to make most advantageous improvements at a minimum of cost and inconvenience to property owners and the business community.

It would seem that almost a dictator would be welcomed on the scene—some one who measured up to the full requirements of a difficult situation, when action and results are of paramount importance to the restoration of the city and the preservation of its prestige. Anyhow, I will hazard the guess that there will be something undertaken, in response to determined pressure, before so very long; also, that there will be needed the services of every architect, every builder, every supply man and every capitalist who has come to Baltimore or who has had his attention turned in this direction. Between the losses of stocks, buildings and business and the amount of money to be received on insurance there will be an enormous deficit, amounting, according to various estimates, to something between \$40,000,000 and \$60,000,000. That the city needs to extend the most cordial and wide-open invitation to every useful factor, builder, capitalist, or whatever he may be, the necessities of the case seem to clearly demonstrate. That the public will be made to feel that this is the true spirit of the town, I have every reason to believe. That it is of the utmost importance that it should, there can be no room for doubt.

BACK TO ITS HOME.

Quick Work of the Mercantile Trust and Deposit Company.

Although in getting into shape for the immediate transaction of business, without the loss of even the part of one day, the achievement of the Mercantile Trust and Deposit Company is typical of the activity everywhere prevailing here. This institution is more fortunate than many others in having sustained so inconsiderable a loss in damage to the home building that a return to its own office was effected the beginning of this week. In the conflagration, which raged all around the building of this company, surrounding it with the fiercest heat, the walls were so absolutely unaffected by the heat that not a dollar will be required in the way of repairs to them. The vaults were absolutely untouched by the flames; no heat or smoke reached them; the doors moved as smoothly as ever; the oil on the time lock was not dry, and the storage vaults in the cellar were in as perfect condition as before the fire.

The damage to the building was caused by sash bolts from an adjoining building falling on the skylights, which let in the heat, and the flames burned up all the furniture in the banking-rooms. The company was thus compelled to find temporary quarters till the damage could be repaired and new equipment obtained. A location was secured at 610 Cathedral street, and here the company opened up for business Monday morning, while the fire was still on.

As soon as possible arrangements were begun for putting the company's building in shape. It is proposed to tear down a partition wall dividing the two room on the main floor, thus giving one of the finest banking-rooms in the country. There will thus be provided better facilities than ever, and the building will be an improvement on its former self.

The officers of the institution are full of confidence in the future of the city, believe that the new Baltimore will surpass the old, and are ready to lend a helping hand in any way in their power. In keeping with this spirit they offer special advantages and liberal inducements for the deposit of insurance money that victims of the fire are to receive.

to 600 they had been accustomed to, and by increasing the force within a week from less than 300 to over 2600, and shortly afterward to about 4500, and by introducing hustling methods in every feature of the work, he succeeded in doing in 11 months what he had promised in 18 and what the English contractors had declared could not be completed under five years.

Of course this record-breaking feat riveted the eyes of all Europe on the "hustling Yankee," and various other big jobs which had been dragging were put in Mr. Stewart's charge. He completed a \$6,000,000 contract on the Midland Railway that had been hanging fire for a long time on account of strikes, and the way he got on with this job—doing it in one year—is an indication of his power of organization and ability to handle men.

"I sent for the leaders of the various unions," said he one time in relating the occurrence, "and had them brought down to London, away from the local atmosphere of their home towns of Manchester and Sheffield. I gave them first-class coaches, something to drink and to smoke, and at London gave them a little dinner. 'Now, boys,' I said, 'enjoy yourselves, but don't drink much, for I don't want it said that I brought you down here to get you loaded and take advantage of you when you were under the influence of liquor.' Then I talked to them—there's everything in the way you talk to anybody on any subject—and I told them what I would do for them and what I wanted to do for the road and how I would have to rely on their helping me, and I got a contract out of every one of them that they wouldn't strike on me while the work was going on, and they didn't. I never have strikes, and mighty little trouble with unions or workmen. You have got to treat your men right, let them see that you know your business so they will have confidence in you, and give them to understand that you are the head. I got along excellently with the English workmen, and found them first-class workmen as a rule."

During the three years Mr. Stewart remained in England he completed \$26,000,000 worth of work, which included \$3,000,000 repairs to the tunnel under the Mersey, the Yerkes powerhouse in London, the Savoy Hotel, a large office building on the Strand and other important undertakings in London, Glasgow and elsewhere. He formed many valuable social and business connections there, carries a highly commendatory letter from the King to the Westinghouse Company for work done under his direction and opened a London office for the firm before returning to his home.

I had not seen Mr. Stewart when I called on him in his office here since I first met him in New Orleans, when he was constructing the Stuyvesant docks for the Illinois Central Railroad in 1896. His black hair has grown partly gray since then—"hustling in England," he says, "for I only own to 42." Force and action are in his every move and feature, and his large experience and his capacity for doing things are evident in his very looks.

I talked with Mr. Stewart about the part that outside architects and builders could play in the work of reconstructing the town.

"I regard their help as absolutely necessary to a speedy restoration of the city," said he, "and not only that, but their presence would result in better and cheaper construction. A

variety of design and fresher and more up-to-date ideas would be secured through having the best architects of the country at work on the buildings, and they could coöperate to the best possible advantage with architects on the ground. The local architects would have their hands full if they looked after the front office work alone—the questions of surveys, conferences with the owners and all the details of that sort, and it would be to their advantage to be able to turn the designing and drafting work over to an outside firm.

"As to builders, a firm that has wide experience and connections elsewhere knows markets and is in a position to take advantage of this knowledge in the purchase of materials.

"Baltimore is going to need all the outside help she can get, and it will be an advantage to her to be able to get it. There is a good deal of interest in Baltimore now, very naturally. Financial, mercantile and business men all through the East are closely watching the business men of Baltimore to see if they will rise to the occasion and rebuild the city as quickly as other cities have done and avoid the present delay."

TO DISPOSE OF THE DEBRIS.

IT IS ESTIMATED THAT 1,600,000 CUBIC YARDS ARE TO BE REMOVED.

"Baltimore's fire presents more difficult problems than any other city has ever had to face," declared Mr. C. W. Wheelock, general manager of the Engineering Company of America, headquarters in New York, to a Manufacturers' Record representative last week. "Although before coming here I had read the reports of conditions, and talked with people about the situation, yet it took a personal visit and inspection of the grounds to fully impress me with the magnitude of the engineering difficulties in the way of clearing the debris away and getting in materials for the construction of new buildings. It seems to me the people of Baltimore are not awake to the enormous task that is before them. Boston and Chicago had no such problems to contend with, and it is going to take engineering ability of the highest order to cope with the situation here. To get the best results and in the speediest manner, some one man of broad ideas, large experience and executive ability and thorough training as an engineer should have general supervision and authority over the work. Unless a man is an engineer he can't possibly appreciate what a proposition is presented here. In Chicago there were, of course, fewer large buildings destroyed than here, and much of the debris was left in the streets, to raise the grades, while the lake front furnished a convenient and easily accessible dumping ground. Boston also had a nearby dumping ground, and the mass of debris was, furthermore, far less in quantity than is here. Figuring on 150 acres of burned area, and deducting one-third of that for streets, which I consider a very conservative estimate, and putting the debris at an average of 10 feet in depth throughout the space occupied by the buildings, there would be something like 1,600,000 cubic yards of debris to be disposed of. I hardly think much of the material could be used again for building purposes, although there is a process by which the old brick could be broken and converted into con-

ENORMOUS SCALE OF OPERATIONS.

HOW THE TREMENDOUS TASK OF CLEANING OUT THE BURNED DISTRICT SHOULD BE ACCOMPLISHED.

"I'll clean out the burned district in 70 days, and do it without a cent of profit to myself," declared Mr. James C. Stewart, the internationally-known contractor, builder and engineering expert, as he gazed out over the desolate waste and talked of the situation with some friends last week.

This was in response to a remark by one of the party that visiting engineers had very generally declared the magnitude of clearing away the ruins seemed to them a more formidable undertaking than local people appeared to realize, and that an estimate of the cost had been made around the neighborhood of \$2,000,000.

"It is a tremendous task, much greater than most people can appreciate," said he, "and it is one that if speedily done will require operations on an enormous scale. No narrow conception of the situation or puny methods of going at it will suffice. But I'll gladly take the contract at \$2,000,000" said he, and then he added the declaration that in order to get work under way, and because he delighted in accomplishing large results, he would undertake the work without pay of any sort. And this from the man who cleaned up Galveston in 45 days and completed building and engineering undertakings in England for the Westinghouse Company involving an outlay of \$26,000,000 in three years' time.

Asked about how he would do the work, he said he would lay down railway tracks and put in teams and men, 6000 or 7000 of them, as many as could be worked. "That's how I have been able to do things," said he, "by organizing a big force, putting men to work."

"A great many of the bricks can be cleaned and piled up somewhere on the lot," said he, "it will be cheaper to clean them and leave them, saving cartage both ways, and many of them are fit for use again in walls. Machinery could be rigged up, steam shovels or cranes, and the debris would be carried off to a dump."

As to how a contract might be made and with whom, he suggested that the city might possibly declare the debris public nuisance, contract to have it removed and assess the owners of the lots. Rains will fill the cellars up, refuse of various kinds will accumulate therein, and the district may easily become a menace to health and a public nuisance well within the legal meaning of the term.

Maybe there's a pointer for the authorities as to the solution of a difficult problem in the random remarks thus thrown out.

That the situation is attracting the attention of the leading builders of the world is attested by the fact that the James Stewart Company has opened an office here. The present

crete. This would make a wall better than a brick wall, and if the brick were left on the ground, so that the expense of carting away and back again were eliminated, a concrete wall of this kind could be put in for about half of what a brick wall would cost. If architects are alive to the possibilities, there is a large amount of brick and stone, untouched by heat, which they could utilize this way.

"There is a vast amount of the debris, however, the old iron and steel and rubbish, which must be moved. To get this out and to bring new materials and machinery in, which would at least equal in volume that taken away, there should by all means be railroad tracks laid into the burned district, and either steam shovels, cranes or the overhead trolley used for moving the debris. Even then the job of handling the mass of stuff would be a tremendous undertaking. When I walked through the district I saw three gangs of about 100 men in all working on the debris, and this three weeks after the fire. Now, if it would take 300 days to move the debris at the rate of 300 cars a day, as I figure it, how long is it going to take a few men with a few teams to make even a perceptible impression on the district? Some idea of the vast amount of rubbish down there can be gained from the reflection that if it

were all piled up 10 feet high it would solidly cover a farm 100 acres in size.

"If Baltimore is to make any creditable headway in recovering from her disaster, it occurs to me that she has got to speedily come to a realization that no ordinary measures will do. Heroic action is imperative. If the present procedure of killing time with reports and suggestions, on which no action is taken, is kept up for any length of time the situation will become all balled up, and Baltimore will find her trade slipping away from her, as the anthracite coal operators found when they got through with their strike. Trade once diverted is hard to get back. It will be diverted by intolerable delays if the railroad business is congested and insufficient accommodations are long continued.

"In this emergency I believe Baltimore needs all of the outside help she can get to interest itself here. There may easily be made the mistake of too much optimism at the present time, for when Baltimore fully wakes up to a realization of what will have to be done before she can recover from the fire the outside world may be found skeptical. Architects, engineers, builders and capital from the outside will all be needed here, and needed badly, and the sooner they are encouraged to come the speedier will be the recovery from the disaster."

for improving it. Now that the fire has removed all the old buildings and wiped out every obstacle to immediate possession, the company has had its architects, Messrs. Parker & Thomas, working night and day on the plans, with the intention of having the building ready for occupancy within nine months. The improvement will cost in the neighborhood of \$500,000, and, if original intentions are not changed by new laws, it will be 10 stories in height.

E. J. Richardson & Sons have let contract for a four-story office building, 40x60, on North street, just south of the Gittings building, to cost \$40,000. Morrow Brothers have the contract.

J. Latimer Hoffman, Jr., announces his intention of rebuilding at 11 East Lexington street. He will construct a five-story office building, with pressed brick front, white facings, colonial style of architecture, and it will contain all modern improvements. The size of the lot is 30x115. The cost will probably be in the neighborhood of \$30,000.

Henry S. Rippel, contractor, proposes the construction of a three-story office building, 22x68, with modern appointments. He is also estimating on plans for the construction of four warehouses of four stories each and one of five stories, within the burned district.

Jas. Evans Sperry, architect, has 40 draughtsmen at work, preparing plans for repairs and reconstruction of very important character. The repairs to the Equitable and Calvert buildings will cost between \$400,000 and \$500,000. With York & Sawyer, of New York, plans are being drawn in Sperry's office for a new building for the Riddlemoser estate, on Fayette near Charles street, at a cost of something more than \$100,000. Among other work on hand by this firm is repairs to Mercantile Trust and Deposit Company's building, to cost probably \$50,000. Also, a five-story warehouse for Emanuel Greenbaum, to cost \$75,000.

Baldwin & Pennington are preparing plans for rebuilding the National Bank of Commerce building. It will be one-story in height, 75x100 feet, and cost \$150,000. They are also preparing the plans for rebuilding the banking-house of Hambleton & Co., at a cost of \$100,000, and are making plans for the new house of the First National Bank. This building will run through from 17 South street to Holliday, the institution having for some time owned both fronts, and proposing now to utilize the entire holding. The new building will be brick and iron, one-story, and will cost \$100,000 or more. The bank is now located at 16 West Saratoga, in an old church building, and its officers have no idea that they will be able to get into their own building for many months to come.

Most of the banks and trust companies are arranging the preliminaries for reconstruction and repairing, which will be undertaken as soon after adjustment of fire losses as is possible. It is figured that these banking and office buildings, according to the degree of damage sustained, will require an expenditure of from \$100,000 to \$500,000 to put them in shape.

The Merchants' National Bank has let a contract to Wells Bros., of Philadelphia, for reconstructing and repairing its building, South and Water streets, the damage to which was originally estimated at \$250,000.

The Chamber of Commerce, whose building was valued at \$250,000, may be able to use the walls, which have remained standing. It is announced that the work of repairing or rebuilding will begin as soon as practicable.

Wilson, Colston & Co., bankers, propose erecting an office building on the site of their building destroyed, on Baltimore street, as soon as details can be arranged.

Wm. J. Beardsley, architect, of New York, states that he has contracted to prepare plans and specifications for eight business houses, to be erected in the burned district. Owners' names and details will be given later.

The Carrollton Hotel will be rebuilt as soon as possible, so Col. N. S. Hill, managing director, announces. The old building was valued at \$300,000, and it is proposed to make the new house an improvement over the old.

Michael Mullin, whose Mullin Hotel was on the very edge of the burned area, proposes to replace the destroyed structure with a new building, costing about \$300,000.

James L. Kernan has announced that he would begin at once on the details of constructing an eight-story hotel, to cost \$150,000.

Announcement has been made of some 20 warehouses to be built within the burned district by various owners, at figures ranging from \$3500 to \$200,000; this is outside of the 95 that will undoubtedly be erected by estates represented by the Safe Deposit & Trust Co., the value of whose property destroyed footed up about \$1,000,000.

The Merchants' Club will replace their \$75,000 building that was burned with a more substantial and costlier home.

The Herald Publishing Co. made a contract with the James Stewart Co. for repairs on the Herald building, and it was expected that occupancy would be given within 60 days. The cost of repairs was put down at about \$200,000. Pending the proposal to widen St. Paul street, which would take a slice off this building, the Herald Co. has held up the contract.

The Daily Record proposes to rebuild at Fayette and St. Paul, expending probably \$250,000.

The B. & O. Railroad is waiting on the city authorities before perfecting plans. It is known that a large building for office purposes—with much more floor space than the old building contained—will be built by the company at some location. The old site may be utilized, the Camden Station property may be built on more extensively, or both may be done. Decision will probably be given shortly after the authorities have decided what they will do as to street widening.

Some investments have been made by outsiders, and it is stated that numerous inquiries have been received by agents and owners. There seems to be some difference in opinion as to values, however, and buyers and sellers are somewhat apart. Non-resident owners have very generally signified an intention of rebuilding, replacing old buildings with better ones. Among such is Henry Smith, of Washington, who proposes to put up a \$100,000 marble building at 13 East Baltimore street, to be occupied by the Hennegan-Bates Company as a jewelry store. This company formerly occupied this same space, and there has been manifested a very general desire on the part of Baltimore street firms to get back to old sites. Thomas

Planning for New Homes.

Ready to Raise Handsome Buildings When There is a Definite Scheme of Rebuilding.

Progress in the rebuilding of Baltimore is being made, plans for a number of new buildings are being drawn and some contracts for construction and repairs have been let. On account of the uncertainty as to proposed street widenings and openings, which has caused a practical suspension in the issuing of building permits, and because until recently no permits covering the burned area have been issued at all, definite plans for building in the fire district have been largely held in abeyance. Payments of insurance on the larger losses have also been deferred until the matter of salvage might be determined, and as a consequence only the smaller losses have, as a rule, been paid until during the present week. So importunate have become the calls by property owners for some definite action by the very deliberate authorities that it seems probable some plan will be fixed on before very much longer, so that the property owners may at least know where they stand and may be in shape, as rapidly as fire losses are adjusted and insurance paid, to definitely decide on what improvements shall be made, and to go ahead with architects and builders accordingly.

So far very few contracts have been closed up, although some exceptions have been recorded. The Manufacturers' Record has closely followed the records, and the announcements of architects and owners, and has so far reported intended reconstruction and repairs in the burned district, covering about 125 buildings and involving a cost of some \$9,000,000. This includes repairs to most of the 25 buildings which are left standing out of the 2600 or so buildings which were within the burned district. Some of the 25 are so badly damaged that it may be decided expedient to rebuild entirely.

It will thus be seen that, while something has been begun, it is a mere starter, and the great work of rebuilding Baltimore is yet to be undertaken.

Among the announcements of plans drawn and contracts closed is one covering the new Stock Exchange. A very handsome five-story structure, of Paladian Renaissance style, with Indiana limestone front, is provided for in the plans of Messrs. Howell & Stokes, of New York, which have been accepted. The building will be 50 feet front by 87 deep, and will cost about \$122,500. Work will be commenced as soon as a permit is issued, and it is expected that the building will be completed by September 1.

James Piper announces that his architects, Lord & Hewlett, of New York, represented in Baltimore by Bayard Turnbull, have completed plans for a five-story office building to be erected at the southeast corner of Baltimore and Hanover streets. As the contract has not been awarded, the price is not stated, but it is planned to have all modern conveniences and will be of handsome exterior design. It is proposed to rush the building to completion within four months from the time the contract is let. Work will be commenced as soon as a building permit is secured. As the location is not affected by the proposed street improvements, speedy action is anticipated.

The Maryland Casualty Company advertises that bids will be received shortly for the construction of its steel office building, which is to occupy the entire west side of Ninth street, 210 feet in extent, with 40 feet on Baltimore, and the same on Fayette street. The company had purchased this site before the fire, but had not anticipated so early an opportunity

& Thompson will return to a finer home at the corner of Baltimore and Light; David Bendann will rebuild at 105 East Baltimore; N. Hess & Company will again be at 112 East Baltimore street, and a large number of other firms have announced their intention of getting back to former locations as soon as they or owners can

rebuild, or their landlords, where they are renters, can construct new places for them.

As soon as the authorities untie the hands of the people it is anticipated that a great degree of activity will ensue, and that every architect and builder on the ground will have his hands full.

Protection Against Future Loss

Suggestions Based upon the Experience of Other Communities.

In the line of providing for the new Baltimore, that prevention, an ounce or so of which, in the way of non-inflammable construction, is worth a great many pounds of cure at the hands of even the most efficient fire-fighting force in the world, suggestions as to a change in laws are altogether worthy of consideration by law-making powers at this time. A very timely word along this line is furnished by Mr. Ralph E. White, architect and engineer of Philadelphia, who, in an interview with a representative of the Manufacturers' Record, had this to say:

"It would seem to me that a very advanced and helpful move regarding the building laws of Baltimore would be for the City Council to adopt the important clauses of either the Philadelphia or New York building laws for, say six months or a year, during which time the details of various building laws could be considered and perfected to fit the conditions of Baltimore in the final adoption of a code of laws governing the construction of buildings. The present laws of the cities I mention have been recently reconsidered and laws adopted to suit the new and better methods of building construction. Their adoption would be a great protection to the city of Baltimore in the character of the construction of new buildings, and also a definite guide by which the architects and engineers could immediately proceed with their plans of new buildings.

"I would suggest the adoption of Act No. 236 of the General Assembly of the State of Pennsylvania relative to the construction of buildings in cities of the first-class. This Act was approved and signed by Governor Pennypacker, April 25, 1903. An outline of the Act, the details of which are published in the Book of Building Laws, issued by the Department of Public Safety of the City of Philadelphia, may be given thus:

"All buildings erected or altered now are classified in one of four classes. The first class includes buildings in which all walls, floors, columns, girders, beams, partitions and roofs are of fire-proof materials, and this construction applies to institutions (for the care or treatment of persons) which exceed two stories in height, and I think the same should also apply to office buildings, department stores and other buildings having over a specified floor area, and in which numerous people congregate or assemble.

"Buildings exceeding four stories in height, which come under the first class, are apartment houses, tenement houses, flat houses, lodging houses, hotels, schools or police stations. In no case are new buildings allowed to exceed 85 feet in height or to be over

six stories, unless they are of the first class.

"Buildings of the second class are those in which the walls are of materials specified in the first class, but in which the floors, columns, beams and girders are of the construction known as 'slow-burning construction,' in which all columns and girders are of wood. Iron or steel may be used for beams, columns or girders in buildings of the second class, if they are protected with an approved method of fire-proofing.

"New buildings over 65 feet high must be either of the first or second classes.

"Buildings of the third class are those in which the walls are of materials specified in the first class, but the interior construction of which are not as required in the buildings of the first and second classes.

"Buildings of the fourth class are those other than of the character specified in the other three classes.

"The beams, girders and columns in buildings of the first class must be protected from changes of the atmosphere and against fire by a covering of fire-proofing which completely envelops them. No wood is allowed in buildings of the first class, excepting for window frames, doors, casings and other interior wood-finish when backed with fire-proof materials. All pipes, conduits, mains and wiring must be enclosed in separate fire-proof ducts. Skeleton wall construction is not allowed in buildings other than of the first class.

"In warehouses, stores or factories the floor areas must be divided by fire-proof walls, so that no space on any floor exceeds 25,000 square feet. The number of openings in such walls is limited, and cannot be greater than 10 feet in height or width. These openings must have two sets of standard fire doors set in metal frames.

"A greater floor space than 25,000 square feet is allowable on the first or grade floor when the entire building is equipped with a good system of automatic sprinklers, but such system must be kept in order.

"All stairways in warehouses, factories or stores in which the floor area on any one floor exceeds 5000 square feet, and all elevators, hoist-ways, hatch-ways, well-holes, chutes, dumb-waiters, light or vent shafts of any description must be enclosed by brick or other fire-proof walls, which shall extend through and above the roof at least three feet. Roofs over such shafts must be covered with a skylight having a metal frame.

"Also in warehouses, stores and factories no wood partitions are allowed from floor to ceiling, nor are brick walls allowed to be furred with wood, and ceilings must not be sealed with

wood. Plastering must either be done on metal lath or directly on the masonry.

"Tower fire-escapes are placed on all buildings of the first, second or third classes which are used for schoolhouses, tenement houses, apartment houses, flat houses, stores, offices, manufactories, work shops, mills or places of assembly or resort. These tower fire-escapes are in addition to the regular stairways and their number is determined by the amount of floor area."

THE BASIN AND BUSINESS.

Partly Filled In It May Be the Site for Great Warehouses.

The filling-in of the upper basin with the debris of the fire is suggested by Mr. Wm. G. Nolting as a means not only of easily disposing of the rubbish but as likewise creating the opportunity for a warehouse system which would surpass anything of the kind in the world.

"Baltimore has an opportunity presented to it now," said Mr. Nolting in discussing the matter with a representative of the Manufacturers' Record, "the acceptance of which, broadly, will give it a wholesale district such as none of its sister cities has or can have, located in the center of its business interests and in touch with the three trunk lines of railways and the wharves.

"The filling-in of the basin is in itself an old suggestion, advocated at various times, usually in summer and principally as a needed sanitary improvement. It is now advocated because of the opportunity the fire has given to rearrange this section of the city and to improve our facilities for wholesale business, and as solving the question of the removal of the debris and the widening of Light and Pratt streets, the city's two streets most in need of widening under the old conditions.

"With the filling-in of the basin to a line about from Jones Falls to the end of Cross street, the city would gain an area equal to about 25 or 30 city blocks or about in ground dimensions, or 400 warehouses 50x100 in size. This district would be only a block or two from the Pennsylvania Railroad at President Street Station; from the B. & O. R. R. and the Belt Line R. R. at Camden Station; only a few blocks from the line of the Wabash, and with the wharves as its eastern boundary. The railroads would be confined in the limits of this district into a Union Yard as a part of the warehouse scheme, and each warehouse would abut on a track at its rear. The shifting could be done by electric engines. Each warehouse would thus receive all out-of-town freight direct from the car and would similarly ship.

"A canal with branches might extend into the heart of the district for barges, etc.

"The wharves would then be on the outer basin reached by a broad two-storyed street—the ground level for shipping and hauling; the upper level for a walkway and passenger approach to the boats. It would seem that they would be as conveniently located both for freight and passengers as now and on a much larger body of water.

"This suggestion of a modern, well laid out wholesale district is not experimental. In St. Louis such a scheme, though on a smaller scale,

has been in use for some years and has proven most successful, the warehouses being occupied by some of St. Louis' largest business enterprises. A visit to Cupples Station is a revelation in the economical handling and shipping of goods and would convince the most skeptical of the immense advantage Baltimore and its merchants would possess with such a warehouse plant.

"In addition to the advantages Baltimore would gain for its business, the value of the reclaimed area would be largely in excess of its cost and would, either sold outright, or better still, remaining under city's control, help to balance the necessary large expenditures the city should make in widening the streets in the burned district and the other expenses that will have to be met should Baltimore look to the future and see itself a large city, and, now while the opportunity is with us, prepare for its future."

CONCRETE FROM DEBRIS.

Broken Bricks to Become Building Material.

Undoubtedly Baltimore will continue for some time the Mecca, not only of well-established architects, builders, engineers, contractors and supply men, but of inventors and owners of new building processes, plans and devices. An interesting example of the latter class is furnished by Mr. Beaumont Jarvis, architect and cement engineer, of Toronto, Canada, who spent some days at the Belvidere last week, and who, on his return to the city shortly, intends organizing a company to push a device for making concrete out of the broken bricks of the ruins and constructing buildings, interior and outside walls of concrete. The distinguishing feature of Mr. Jarvis' device is an adjustable form by which a course of concrete can be poured at one time to the full height of one story, and by the entire circumference of the building.

"With 10 men and a mixing machine," Mr. Jarvis said, "I can do as much work as 100 men could do laying brick, and no skilled labor is required in this work. Instead of spending large sums of money to take the brick debris away from the burned district, my plan would be to put up a mixer, dump the broken brick in it and produce concrete that would make a far stronger building than were those destroyed, and one that would be absolutely fire-proof. When finished the buildings could not be told from natural stone, and they would be more durable than most stone buildings, as a concrete made from Portland cement, properly manipulated, is absolutely indestructible. Every engineer of any prominence uses concrete for his pier abutments, breakwaters, dams, etc., for the reason that when cast they become a monolith, jointless and everlasting. There is a great opportunity here for the use of concrete in many ways, and I expect to organize for operations shortly."

Architects of Other Cities.

Mr. John C. Westervelt, of the firm of W. Wheeler Smith, Westervelt & Austin, associate architects, New York, was one of the many visiting professional men who spent several days in Baltimore last week, and then, departing, as did most of the others, for home at the end of the week, to

remain until the building activity begins here.

"As soon as permits begin to be taken out," said Mr. Westerlief, "I apprehend there will be a good deal of inquiry for outside architects and builders. The 35 or so architects I see in the directory contains, and the builders and contractors located here can hardly be expected to carry a force or be able to organize one on an emergency capable of handling such an extraordinary condition as exists here. There will doubtless be found ample occasion for calling in a large amount of outside help of various kinds."

MEASURES FOR LEGISLATION.

Municipal Authorities to Urge Prompt Action at Annapolis.

City authorities of Baltimore will exert themselves at Annapolis in behalf of prompt action by the Legislature upon measures for improvements in the burned district. Passage of the proposed bills following in the broad, the recommendations of the Emergency Committee will encourage citizens to believe that the work of restoration and betterment may soon begin.

The proposed legislation provides for the appointment by the Mayor of a paid, bi-partisan commission, the Mayor being ex-officio a member, whose duty shall be to have charge of the laying out, opening and widening of streets in the burned district, straightening and closing streets and alleys, establishing public squares and market spaces, building lines and the width of sidewalks, and also has power to partly fill in a portion of the basin and establish wharves and docks. The commission is authorized to employ an engineer and such clerical force as may be necessary, and to fix their compensation. It is to have such further power as the Mayor and Council may confer on it.

The Board of Estimates and the Board of Public Improvements are constituted joint bodies with the commission for the purpose of considering their report and proposed changes, etc., and all must agree upon any plan to make it effective. The plans so adopted must be first approved by the Mayor and Council, and then, after such ratification by the Mayor and Council and the appropriation by the Mayor and Council of the necessary funds, the Burned District Commission is to carry the plans into effect. The commission is given the power to acquire the necessary property for carrying out the plans, by purchase, condemnation or otherwise, and the absolute power to agree with the owners of property needed, as to terms and price for the same.

The commission is also empowered to acquire lots and to sell such portions as may not be needed and to contract for the removal of debris from said lots and from the sidewalks and beds of streets to be widened.

If the commission should decide to widen Light street south of Pratt street on the east side or Pratt street along the harbor on the south side, then the Mayor and City Council shall provide by ordinance for filling up the harbor to the necessary extent.

The commission has power to close streets and alleys, according to the method set forth at length in the bill.

Authority is given to the Mayor and City Council to appropriate for the purposes of the act \$4,422,460.74 of the Western Maryland Railroad money

now to the credit of the general sinking fund, or the money to be paid out of the proceeds of any loan which may be created for the purposes of the act. These appropriations are not required to be incorporated in the annual ordinance of estimates.

For expedition, the draft of this measure was taken to Annapolis on Tuesday afternoon, so that it might be engrossed in advance of its introduction into the Legislature.

Another measure will provide for submission to the voters in April of a proposition for a loan of \$6,000,000, to be expended in carrying out plans for rehabilitation.

It is understood that the Board of Estimates and the Board of Public Improvements have not come to a final agreement as to details of improvement plans.

Among the recommendations made by the Emergency Committee was that provision be made for a commission, composed of two architects, two builders and a lawyer, to frame a new code of building laws. An ordinance to that effect has been introduced into the Second Branch of the City Council.

PHILADELPHIA'S SERVICE.

Test of the Fire Main for the Congested District.

[Special Cor. Manufacturers' Record.]

Philadelphia, Pa., Mar. 2.

Without a hitch or break of any kind to mar the success of the trial, the endurance test of one of the big fire main pumps was ended at 10 o'clock this morning, after a continuous run of exactly 24 hours. In that period the pressure developed fluctuated but slightly, and not even a bearing became hot. When the 24 hours were up the pump was in condition to run for as many days if such a test were thought necessary. There is but the smallest possibility of the pumps ever being called upon to repeat the performance except in the case of another trial.

This is one of the great pumps used to force and keep at constant high pressure water from the Delaware into the fire main system which permeates the fire-belt or congested wholesale district of the city. This system is independent of the city's water supply, and the pipes connected with it are of especial interest.

John E. Codman, chief draughtsman of the Bureau of Water, who was in direct charge of the test, was fully satisfied with the results, as were M. R. Muckle, Jr., and J. S. Muckle, of M. Richards Muckle, Jr., & Co., the contractors who designed and installed the plant. The contract requirements were exceeded in every way.

The engine itself—No. 6—is capable of developing 280 horse-power, but only 238 horse-power was used. As one of the engineers expressed it: "It was like an elephant drawing a baby coach." The officials of the Bureau never left the power-house while the run was on, and it was a tired set of men who started to report to Chief Hand after the test.

The average pressure of the pump was 303.6 pounds to the square inch. This water was drawn from the Delaware and discharged into a sewer. The engine consumed 20.54 cubic feet of gas per horse-power an hour. For the 24 hours 117,455 feet of gas were used, which, at the rate of \$1 per 1000 feet, will cost the city \$117.45. By the contract one hour was allowed the

contractors for repairs. Not a minute of this allowance was needed, and all that the crew of engineers had to do was to carefully watch the combined engine and pump. The engineers agreed that the test could not be duplicated with steam as motive power. The records made, the figures of the performance being noted each hour, are in Chief Hand's possession, and some interesting deductions will be drawn by the engineers.

The success of the fire main system of Philadelphia has attracted the attention of many municipalities throughout the country. Chief Hand is in receipt of many queries for information, as are the contractors. Last week an inquiry came from a foreign country. The big fire in Baltimore, closely followed by Rochester's disaster, has renewed interest in the system, and several cities have already planned systems of their own on the lines of the one in operation here.

HOW TO HELP BALTIMORE.

(Raleigh News and Observer.)

The time has now come for the country adjacent to Baltimore to consider how to help that noble city in the wake of its great calamity. When the first news came that the most important business section of Baltimore had been consumed by fire, there was readiness everywhere to come to the relief of the fire-stricken people. They felt at once the wave of sympathy that touched hearts in every portion of the republic. They are a self-reliant people and a sensible people, and have seen to it that there has been no suffering in any quarter. The problem of help and work for all was early taken hold of and settled. There is now no appeal to the generosity of other cities and States.

With a promptness that challenges national admiration, the business men of Baltimore rallied from the fire, secured new stores and warehouses, and were soon ready to resume business. Nor for a day did any of them sit down in the ashes to mourn over their losses. As soon as the embers were cool, they began to make preparations for rebuilding upon a larger scale, and they are proceeding to build a more magnificent business section than was burned on that fatal Sabbath. But they are not waiting to erect new and commodious structures before preparing to serve all their customers and enlarge their business in their temporary quarters. Every business house burned out has already put itself in position to fill orders and is depending upon former customers to help them maintain themselves.

"How to help Baltimore" was the theme of not a few editorials. The answer is easy! Stick to Baltimore in this hour of its trouble. This is advice that we wish to enforce upon North Carolina business men. For generations merchants of North Carolina have been accustomed to buy the bulk of their goods from Baltimore houses.

There has come down from father to son a kindly relationship between the business men of this State and of Baltimore. These relationships went beyond the mere formalities of business. The mutual trading relations were helped by social, political, friendly relations so that Baltimore has seemed more like a home city than like a city in another State. The North Carolina people have sung "Maryland, My Maryland" with the same spirit and understanding as have the natives of the State of Maryland, they have re-

joiced in their industrial growth, and taken the keenest interest in their political conflicts. Therefore they sympathized deeply in the losses occasioned by the notable fire.

It is to be regretted that any business house in any city in America should seek to profit at the expense of Baltimore in this day of its calamity, but there are a few concerns in other cities that have made themselves busy in the effort to divert trade from Baltimore business houses. A few have gone to the extent of telling merchants that their old Baltimore jobbers could attend to no business and steal away their natural trade by misrepresentation. It is difficult to believe that any man with the lowest conception of business principles, could be guilty of such conduct in an hour when all good men had their sympathies aroused in behalf of the men who had seen the savings of a life time go up in smoke, through no negligence. It is a time that should call for business altruism, for the help of men in like business in other cities, for refusal to try to rise upon the misfortune of competitors. In most instances the spirit of helpfulness has been uppermost, but one of the first business men in Baltimore, whose house does a large business in North Carolina, in a private letter says he has evidence that a competitor from another city has informed a portion of his trade that they must go elsewhere, whereas, the burned-out firm is prepared to fill orders. Such conduct should not be honored by being called business. The correct name for it is rather "ghoulism," unworthy of honorable business men. Such instances are rare, but they are numerous enough to make it proper to expose them. The firm alluded to was ready within three days after the fire to fill orders and the attempt to divert its business by a false statement naturally aroused the resentment of the honorable men at the head of the firm.

Baltimore owes much to North Carolina and North Carolina owes much to Baltimore. Just now the duty which North Carolina owes to that city is to continue its business relations with Baltimore's business men, to increase their orders to Baltimore houses, and to show in such practical way that it has practical sympathy with those who have suffered by the fire. They can do as well in Baltimore as anywhere, and in some lines can do better. They can do as well now as before the fire. The Baltimore people do not ask charity. They simply ask their old friends and patrons "to help them to help themselves." They are rapidly getting on their feet. North Carolina people should esteem it a privilege to give larger orders than ever for the spring trade to that plucky and self-reliant chief city of the South and help them to rebuild in splendor and upon enlarged plans.

That's the practical way to help Baltimore to-day.

The Seaboard Air Line has received bids for building its freight depot at Birmingham, Ala. It will be on Avenue A between Nineteenth and Twentieth streets. F. H. Jones, of Atlanta, is the engineer in charge of construction.

A steamship line between Norfolk, Va., and Tampa, Fla., has been established, principally by Philadelphia capitalists.

SALT WATER MAINS.**New York's Plan for Meeting Great Fire Emergencies.**

Probably no suggestion for an improvement was ever so quickly taken up, says the New York Sun, as Mayor McClellan's scheme for an auxiliary system of fire mains to supply salt water from the rivers for fire emergency purposes in the metropolis. The Sun gave the following account of the public hearing held on Monday last:

"The unanimity of sentiment shown at it had been so convincing that the Mayor afterward requested Commissioner Oakley, of the Department of Water Supply, to furnish him within two weeks with plans and figures of the estimated cost of installing the system both here and in Brooklyn, so that the Board of Estimate could get to work on it. Mr. Oakley, who came back from Philadelphia convinced by what he saw there that New York is far behind in its fire protection methods, promised to have reports from engineers ready in that time. In fact tentative figures have already been prepared.

"It is tentatively proposed that pipes be laid in two districts in Manhattan and Brooklyn, by way of a test of efficiency; in this borough, in the dry goods district and the Bowery.

"The hearing was held in the Council Chamber, and business men from both sides of the river attended. While many of these were from Manhattan, the interest shown by Brooklyn was even greater. President Littleton had a representative committee of business men of that borough, who lined up behind him and with facts and figures urged the adoption of the Mayor's plan.

"E. W. Bloomingdale represented the Retail Dry Goods Association of this borough, so that there was no doubt where the dry goods men stood on the question.

"In opening the hearing, Mayor McClellan briefly stated its purpose, and then asked those in opposition to speak first. Only two persons responded. One was Mr. Schieren and the other E. R. Kennedy, of the insurance firm of Weed & Kennedy.

"Mr. Schieren, who spoke first, declared at the outset that he was not opposed to an extension of the water mains, but he wanted them to hold fresh water instead of salt. He had no doubt, he said, that fresh water could be easily obtained, but an important objection was that salt water was a greater destroyer of goods than fresh, and pumped in from the rivers could not but be mixed with sewage. In his particular business, the leather business, there had often been a total loss to goods where salt water had been used.

"What the city wants," said Mr. Schieren, "is a great fresh water supply. I suggest emergency mains tapping the reservoirs. Only 3 per cent. of the water supply is now used for fire purposes. If pipes were laid direct from the reservoirs for use only in cases of emergency, I think the pressure would be sufficient."

"Rather than not have any emergency supply, Mr. Schieren said, however, he, of course, was in favor of the salt water system.

"Mr. Kennedy cited the same points as Mr. Schieren, laying stress on a statement which he said had been made to him by an engineer of the Fire Department that the amount of

water used in a year for fire purposes was only half of one day's supply. Like Mr. Schieren, however, he said he would prefer the salt water system to no additional system.

"Abraham Abraham, of the firm of Abraham & Straus, of Brooklyn, was the first to speak in favor of the scheme. He said that two years ago 120 Brooklyn merchants had protested against their fire rates being raised 20 per cent., and had been told by the underwriters that the increase was justified on account of the inadequate water supply in Brooklyn. It was only through the interposition of Providence, he said, that a worse calamity than Chicago or Baltimore suffered had not visited Brooklyn. Said Mr. Abraham:

"A number of insurance companies have now withdrawn from underwriting Brooklyn risks. A still further advance in rates is threatened, and if put into execution will be a check to the growth and prosperity of Brooklyn. The danger of destruction by fire and the great cost of insurance now deters many merchants and manufacturers from expanding their plants, prevents new enterprises in Brooklyn and may cause the withdrawal of large industries to other localities. What if the cost of an auxiliary salt water plant in the congested district of New York and Brooklyn should be five, ten or even twenty millions of dollars, that is a mere bagatelle to conserve and safeguard thousands of millions of dollars of property. The cost of an auxiliary salt water plant will be saved in a few years to the insured by the lessened premium on rates, besides giving every citizen and property owner, whether large or small, a sense of security and peace of mind which is not possible under present conditions. Every thoughtful citizen and taxpayer favors this proposition. It almost seems like a parody to have a costly fire department, with noble fire-fighters, and no water to fight with. It seems to me that the preservation of our lives and our homes and our places of business should command first consideration, to the exclusion, if necessary, of everything else. What need of bridges, tunnels and school-houses, if as God forbid, we should be visited by a general conflagration that would wipe out at one blow a large portion of our city?"

"Asked by the Mayor what he had to say to Mr. Schieren's objections, Mr. Abraham said that, while salt water might be a little more destructive than fresh, the choking of a fire before it became a conflagration was what was needed.

"We may use only three per cent. of water for fire purposes," said he, "but when we do want water we want it badly."

"Frank R. Chambers, of the Merchants' Association, urged that in addition to the laying salt water mains the building laws be amended requiring owners to provide sprinklers inside and out. Replying to the opposition, he said:

"A fire in this city like that of Baltimore would sweep the city from Chambers street to Twenty-third, from river to river. We ask, in the name of the thousands who would suffer from such a thing, that this system be installed at once. Carry out the pipes far enough and there will be no contamination."

"Lowell M. Palmer, of Brooklyn, said that the water supply in Brooklyn was so inadequate that water was

refused to towboats, and in his house in Clinton avenue there was no water on the third floor at all on Mondays.

"Suppose," he said, "that the damage done by salt water is a little more. We pay the premiums. We want something with which to put out the fire."

"John A. Moore, an electrical engineer, said that at the Wick fire the mains near the fire were pumped dry and 10 engines were forced to try to pump water through 1000 feet of hose, a thing no engine could do.

"John R. Waters, an insurance underwriter, who said he represented Manhattan and Brooklyn merchants mutually insured for \$250,000,000, pointed out another advantage of salt water. As proved by experts, he said, its extinguishing qualities were better than those of fresh, a fact which more than offset the damage.

"E. W. Bloomingdale, speaking for the Retail Dry Goods Association, said that while the members of that association were insured for over \$100,000,000, this insurance, although it might pay the losses on goods, could never indemnify them for the loss that a cessation of business through a conflagration would cause.

"While we have gone to great expense," said Mr. Bloomingdale, "and taken every known precaution inside our buildings, we are to-day in absolute danger of a general fire from without. With salt water we would be getting absolute protection."

"Henry W. Eaton, representing the Board of Fire Underwriters, spoke in favor of the Mayor's plan, which he said the underwriters had indorsed without a dissenting voice. Mr. Schieren's, he said, would not be sufficient, in winter, at any rate. John O'Connell, who for years had charge of the reservoirs in Queens, also knocked some of the supports from under Mr. Schieren's plan when he said that the limit of these reservoirs had been reached.

"Then Major Woodbury took the floor. He said it was absolutely impossible to keep asphalt clean without water. In Manhattan there was a little water to use for this purpose, and in Brooklyn none. In summer, even in this borough, there was no water to spare. In flying dust were germs of disease which were harmless if wet. Salt water flushing if used by his department would decrease the death rate perceptibly.

"Mr. Schieren questioned Major Woodbury about the condition of the water in the rivers. His reason seemed to be that an observation of the East river, which he said he had made coming over the bridge yesterday morning, showed scum all over it. Commissioner Woodbury pointed out that water would not be taken from the surface and that investigation had shown that the scum was only on the surface. A chemical analysis had shown that while water was stagnant at the bulkhead line, at the pier heads it was clean, owing to the depth and the current.

"I wish to say," Mr. Schieren then said to the Mayor, "that the city should have this plan, and I am now heartily in favor of it."

"Fire Commissioner Hayes, Chief Croker and Commissioner Oakley were among those at the hearing. Mr. Oakley said there wouldn't have been any opposition had Mr. Schieren seen what he and Chief Croker had witnessed in Philadelphia.

"An alarm was sounded for our

benefit from the dry goods district," said the Commissioner. "In just 45 seconds the six gas engines at the pumping station there had 200 pounds pressure of water at every hydrant in that section. They could have raised this to 300 pounds pressure. They can also attach seven or eight lines of hose by siamesing them to these hydrants, enabling a great volume of water to be turned on a building from one hydrant."

"Mr. Oakley said that Philadelphia had found that gas engines were much cheaper than electrical engines. By an electric spark these engines are ignited by the alarm turned in to the power-house.

"Chief Engineer DeVarona, in charge of the Brooklyn water supply, has made a preliminary report of the estimated cost of installing salt water mains and pumping stations in three Brooklyn districts—Coney Island, the dry goods district and the river-front—amounting to about 14,000 acres. The cost of installation Mr. DeVarona has figured out to be \$1,305,000 and the annual cost of maintaining the system \$80,000."

Big Portland Cement Contract.

Bids were opened this week at the National Interior Department for the furnishing of 150,000 barrels of Portland cement to be used in the construction of the great irrigation dam near Phoenix, Ariz. Owing to the long haul to Globe, and the fact that after the cement reaches that point it must be hauled over a rough mountainous road a distance of 40 miles to the site of the dam, only a few bids were received and the figures were much higher than the price at which the cement is offered at Globe.

The bidders also took into consideration the unusually high bond of 50 per cent. of the contract, and the fact that 20 per cent. was to be retained on each payment until after the contract had been fulfilled to the satisfaction of the department. As this 20 per cent. amounted to as much, if not more, than the actual cost of the cement itself, the contractor would have to wait until all the cement was delivered and accepted before receiving the money.

The lowest bid made was that of the Portland Cement Co. of Denver, which offered to supply this cement at the dam site at \$4.81 per barrel under the provisions of the specifications, or for \$4.52 per barrel on consideration that the Government would pay for the cement as delivered, instead of withholding the 20 per cent.

The Iola Portland Cement Co. of Iola, Kans., bid \$5.49 per barrel delivered at the dam site, and the Pacific Portland Cement Co. of San Francisco, \$5.70 per barrel. The Atlas Portland Cement Co. of New York City said it was anxious to bid, but was prevented from doing so by the extreme and unusual conditions imposed. It offered to supply cement at Mesa or Globe from its mills at Hamilton, Mo., at \$3.35 in wooden barrels, or \$2.96 in duck bags.

A report from Havana says that Sir William Van Horne, president of the Cuba Railroad, is preparing to establish steamship service between some Mexican port, Cuba and Canada.

Messrs. Kuchler & Hehl, certified public accountants and auditors, have temporarily located at 104 E. Lexington street, Baltimore.

MANUFACTURERS' RECORD.

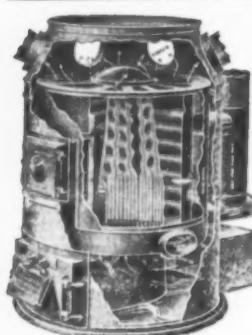
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PROPOSALS.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., February 25, 1904.—Sealed proposals will be received at this office until 3 o'clock P. M. on the 7th day of April, 1904, and then opened, for the low-pressure steam-heating apparatus, complete in place, for the United States Court House and Post Office building and extension, Greensboro, N. C., in accordance with drawings and specification, copies of which may be had at this office or at the office of the Superintendent at Greensboro, N. C., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

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